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NORTH AMERICAN HOG/PORK STUDY

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A Summary Report Prepared by the
ECONOMICS BRANCH
CANADA DEPARTMENT OF AGRICULTURE

PREFACE

This publication is a summary of a working document reporting the results and conclusions of a study of the North American hog and pork market done for the Economics Branch, Canada Department of Agriculture, Ottawa. The working document was written by Murray H. Hawkins, University of Alberta, Ralph K. Bennett, Consultant, and A.M. Boswell, Economist, C.D.A. Mr. Boswell assisted in all phases of the study and his written contribution to the document was a review of statistics on production, consumption and trade.

E. Crowston and J.V.L. Lefebvre, Canada Department of Industry, Trade and Commerce, helped to arrange and conduct survey interviews.

D.A. West, Economist, Canada Department of Agriculture also assisted in the project.

Appreciation is extended to the Canadian Pork Council, the Meat Packers Council of Canada, and the many producer, packer, wholesale, retail, and government people in Canada and the United States who provided information and advice for the study.

The views expressed in this report are not necessarily those of the Canada Department of Agriculture or the Department of Industry, Trade and Commerce.

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CHAPTER 1

SUMMARY AND CONCLUSIONS

Recent changes in grain markets have stimulated widespread interest in the livestock industry as a growth area of Canada's agricultural sector. The question facing the Canadian pork industry is whether to plan primarily in terms of serving the domestic market or whether possibilities exist for developing export markets.

Objectives and Procedure

This study examines Canada's potential role in the North American hog and pork market. Emphasis of the study is on regional, product, and price characteristics of the U.S. demand for Canadian pork and any changes in the marketing system needed to service this demand.

Primary data and information were obtained in an extensive interview survey conducted in Canada and the United States in the spring of 1971. Two consultants conducted the survey, with the assistance of government personnel, and this publication is based on their report.

Results

Level of Pork Trade

From 1965 to 1969, Canada's average annual pork exports totaled 50 million pounds - about seven percent of production. At the same time, imports averaged 44 million pounds. The United States accounted for 90 percent of Canada's pork exports and 84 percent of her imports during this period. Canada - United States trade is much less important to the larger U.S. pork industry than it is to Canada's industry.

The level of total pork exports to the U.S. has shown little trend in the past 15 years. The composition of the total has changed somewhat with fresh and frozen products accounting for an increased percentage of the total. In 1965-69, fresh and frozen products were 85 percent of the total, processed 12 percent and canned three percent. Heavy hams, which are shipped to a specialized premium market in New York City, account for roughly 90 percent of exports in the fresh or frozen category. The major processed item exported is "bacon and sides". Although all regions ship heavy hams to New York, processed products primarily move from eastern and western Canada to the Mid Atlantic and Pacific regions, respectively.

Imports from the U.S. have shown little trend in recent years but have featured wide annual variation. The major category of imports and the source of the variation are fresh and frozen products, mainly light hams, bellies, shoulder cuts, spareribs and, in some years, carcasses and sides. Cured fat backs and cured bacon are the major processed items imported. Roughly 75 percent of the fresh and frozen imports and all the processed imports from the U.S. enter eastern Canada.

Since 1969, the major off-shore export for both Canada and the U.S. has been the sale of frozen boneless backs to Japan. Since 1965, the major item imported from off-shore to Canada has been canned luncheon meat from Denmark. The U.S. imports are dominated by premium quality canned hams from Denmark, Holland, Poland, and Yugoslavia. On balance, North America (Canada and the U.S.) is a net importer of pork.

The Influence of Price and Quality on Trade

The price level in Canada is closely tied to the price level in the United States. The three most important relationships between Canadian and U.S. prices are: (1) changes in U.S. production have a dominant influence on the North American price level, (2) regional differences in the location of production and consumption in the two countries result in different regional price patterns, and (3) the major Canadian products sold in the U.S. obtain a higher price than corresponding U.S. products, while U.S. products generally sell in Canada at or below the price of corresponding Canadian products.

The differential in prices between Canada and the U.S. depends on whether Canada is in a "net export", "net import", or "intermediate" position. The implications of these situations, however, are somewhat obscured by the fact that trade is in cuts. In particular, the highly fluctuating level of fresh or frozen imports indicates that these U.S. products enter Canada in response to changes in prices in the two countries and the relatively constant level of Canadian exports of fresh and frozen products (mainly hams), and the premium prices received for them, indicate the importance to this trade of the quality factor.

Quality is primarily a function of the amount of intermuscular fat and exports are concentrated in those products where this characteristic is important. The Canadian grading and pricing system for hogs is the key factor in Canada's production of lean pork. Pork quality in the U.S., however, has improved appreciably in recent years. The heavier U.S. hog produces larger hams, loins, and bellies than the Canadian hog and, in this respect, has some advantages over the Canadian hog at least in the U.S. market.

Market Development

The question of what can be done to increase Canadian exports to the U.S. applies primarily to processed products. Three topics are discussed - stability of supply, product promotion, and the development of new products.

The importance of an assured, competitively priced supply was strongly emphasized by all persons interviewed as the key factor in developing export markets. Development of a market for a branded processed product requires a good deal of effort over a long period of time. Supplies must be available at all times or customers will go elsewhere. Promotional activities cannot be undertaken without assurance that the product will be available on a continuing basis and at competitive prices.

The major means of promotion used are packer allowances to retailers for newspaper and in-store advertising, and government sponsored promotions. In both cases, the major problem would appear to be that of assuring the supplies and prices necessary to capitalize on these activities.

Canadian processors are examining new product developments in several areas. One is canned hams, and includes an improved five pound pear-shaped ham for consumer use and a rectangular ham for slicing. The U.S. market for slicing hams is large but is dominated by canned hams imported from Europe. The European hams are of excellent quality and command premium prices.

The U.S. market is not homogeneous. Opportunities for exports to specific markets depend on characteristics of their location, population, etc. Population centers on the west and east coasts provide the greatest potential.

The Export Marketing System

Meat inspection, transportation, and within market distribution are three essential components of export marketing. Each of these components is described briefly and some apparent problems are noted.

Meat Inspection: "Meat inspection" covers the activities of government to ensure that meat products are produced under sanitary conditions, that meat products are free of disease and contaminants, and that labels accurately describe the contents of the package. As in the case of any regulatory program, especially one involving internationally traded goods, the enforcement procedures at times create "problems" including those of uncertainty and added expense.

Foreign plants shipping meat to the United States are inspected on a regular basis. Standards applied by the U.S. to foreign plants are the same as those applied to U.S. plants and are very close to the corresponding Canadian standards. Canadian packers were concerned by the additional inspections and the risk that the standards might be changed. As experience has been gained with the regulations these concerns have diminished to some extent.

Meat entering the U.S. is inspected at the port of entry or destination plant, if the plant is federally inspected. Canadian packers reported that the two regulations which caused most concern were those governing hair on "skin-on" products and those regulating moisture content of processed products. Costs of having a shipment refused include the loss of actual and potential export business because of the uncertainty created about the shipper's ability to supply the market.

Several problems associated with labels, including the length of time required to obtain label approval, were noted by Canadian exporters.

Transportation: Inadequate transportation services is a crucial problem for Canadian exporters, especially those in the West. In both eastern and western Canada, shippers experienced high costs and inadequate service on less than truck load shipments and most processed products are shipped in less than truck loads. Western shippers also have unsatisfactory service for truck loads. Export sales in the West are often made to trading firms at the plant door. These sales are considered to be unsatisfactory in terms of developing export market potentials fully.

Distribution: One large Canadian firm achieves local market distribution through a subsidiary firm. All other exporters use U.S. meat brokers. In some cases, difficulties have been experienced in getting adequate brokerage service. Some importers reported difficulty in keeping informed about Canadian market conditions, trade regulations, etc. The major problem underlying these difficulties in obtaining adequate distribution is uncertainty of supply. As indicated above, the lack of supplies, or uncertainty about them, can be created by price changes, border crossing problems, and inadequate transportation services.

Live Hog Exports

During the 1966-69 period exports of live hogs for slaughter averaged 16,435 head per year. These hogs were mainly sows and boars for slaughter. In 1970, exports of straight hogs, primarily from Alberta to the Pacific and Mountain regions, increased total exports of slaughter hogs to 71,465 head. The rapid increase in exports of market hogs was based on the dropping of the federal

government's carcass quality premium at the end of 1968 and the drop in Canadian prices relative to U.S. prices in 1970.

The various factors discussed in connection with pork exports, namely price, quality and weight of hogs, and stability of export supplies, apply to an assessment of the potential for live hog exports. Several changes in the hog selling mechanism and improved border crossing procedures would facilitate this trade.

Conclusions and Recommendations

Specific recommendations presented in the working document are reproduced in Chapter 9. The following comments and observations also are reproduced from the working document.

Our final observations and comments will be of a positive nature. We do not underestimate the difficulties involved in exploiting the U.S. market for Canadian pork sales. However, if Canadian pork producers, marketing boards, pork processors, and government agencies want to become seriously and continuously involved in servicing and facilitating U.S. - Canadian pork trade, the business is there.

Despite recent setbacks (in) the U.S.-Canada trade relations and periodic "family" arguments, the study team believes fully in the long term potential of the U.S. pork market as a market for Canadian pork products. The Canadian "image" is good. The basic trade relations between the two countries are friendly and on a sound basis. In addition trade practices and institutions are familiar and communications (are) available on a personal basis. If (a) Canadian processors are careful in their selection of markets and properly segment and service the potential demand for their individual products, and if (b) hog producers increase their commitment to export sales on a national basis, Canada will sell a large amount of pork to the U.S. in the future. Attention to quality, packaging, transportation, promotion, product development, meat and plant inspection, and market intelligence will pay large dividends in enlarging Canada's share of the U.S. pork market.

Conversely, as U.S. supplies become more adapted to Canadian consumer wants, U.S. imports into Canada can be expected to increase. The potential inherent in the U.S. market should largely offset these periodic inflows. However, Canadian swine producers will have to continue to be competitive in quality and price in order to maintain domestic and export sales. U.S. pork quality is improving, and energetic efforts will have to be made by Canadian swine producers to maintain their average superiority.

Marketing boards in Canada will have to take the initiative in developing quality hog supplies and in providing sales methods which encourage U.S. pork processors to buy live hogs in Canada on a competitive basis. We must compete for U.S. sales on a continuing basis, not only on an occasional basis when the price cycle is exactly correct. In plain words, we must keep our quality advantage, reduce obstacles to trade, produce an exportable, planned surplus, and tie ourselves more meaningfully to the North American pork market. The rewards for commitment will be well worth the effort.

CHAPTER 2

INTRODUCTION

Faced with rapidly expanding hog production in 1970, Canadian swine producers and meat packers became increasingly concerned about the nature and extent of the long-run market for Canadian hogs and pork. Apparent basic changes in wheat and feed grains markets were a key factor in this concern. The question was the degree to which the pork producing sector should approach the 1970's with an outward looking export oriented view or, conversely the degree to which it should be concerned more or less exclusively with the domestic market. More basically the question was how the industry could best take advantage of whatever market opportunities existed or might be developed.

A study was designed to contribute to this decision by examining Canada's position in domestic and export markets. Since the great bulk of Canada's trade in hogs and pork is with the United States, emphasis was placed on analyzing this trade. In fact, the Canadian hog-pork industry essentially operates in a North American context and this broader point of view was emphasized in this study.

Objectives of the overall project included a review of market developments in off-shore countries, an econometric analysis of factors influencing exports and imports, an analysis of the competitive position of Canadian and U.S. producing regions in selected markets and an evaluation of the potential market for Canadian pork in the United States. This report deals primarily with the last stated objective^{1/}, but the data, analyses and recommendations also contribute to the other objectives.

^{1/} Work on the other objectives is continuing.

Objectives

The specific objectives of this phase of the overall project were:

1. To estimate broad future trends in trade for pork products within North America, with special reference to potential outlets for Canadian exports in the U.S.
2. To estimate the potential U.S. demand for pork imports in terms of:
 - (a) form of product (fresh, processed, canned)
 - (b) quality and cut
 - (c) relative prices
 - (d) market areas
 - (e) potential response to promotional activities.
3. To outline and determine problem areas which may occur in attempting to maintain a continuing trade in pork products between the U.S. and Canada.
4. To determine the implications of the results for industry and government.

Procedure

The Economics Branch of the Canada Department of Agriculture assembled and reviewed data on Canada's trade in hogs and pork with the U.S. and other countries.

Primary data and information were obtained by an interview survey of meat packers, brokers, retailers, producer and trade associations, and governments. As indicated in the preface to this report, two consultants were retained to assist in this phase of the study. Top executive and operating level persons were interviewed. Interviews were first conducted in Canada over a two week period in January, 1971. Based on an analysis of the replies to this survey, a set of questions was developed to be discussed with people participating in the meat trade in the United States. Interviews in the United States spanned a three month period. Five to 10 interviews were conducted in each of 18 U.S. cities.

Findings from the above analyses have been integrated and the implications for private and public policies developed.

Outline of Report

A statistical summary of various aspects of Canada and U.S. trade is presented in Chapter 3. Hog and pork prices and qualities are important factors influencing trade levels and these effects are discussed in Chapters 4 and 5, respectively. Chapter 6 summarizes the role of supply and price stability, promotion, product competition, and several regional factors in the development of export market potentials. Meat inspection, transportation, and distribution are three parts of the marketing system essential to export trade and some problems associated with these activities are discussed in Chapter 7. Chapter 8 examines the export market for live slaughter hogs.

The set of recommendations made in the consultant's report is reproduced in full in Chapter 9.

CHAPTER 3

INTERNATIONAL PORK TRADING PATTERNS FOR CANADA AND THE UNITED STATES

Canadian Pork Exports

Trends in Aggregate Exports

Export markets have long represented an important outlet for Canadian pork producers. From 1932 until the end of 1950 the major Canadian export market was the United Kingdom. Canadian hog products, largely in the form of Wiltshire sides, had a preferred position in the British bacon trade. This trade was based on a series of agreements which were terminated in 1950.

Since the end of the British trade, the United States has been the major foreign market for Canadian pork (Table 1)^{1/}. Exports to the U.S. grew rapidly in the mid 1950's and in the 1955-59 period averaged 51.3 million pounds. In the first half of the 1960's the average dropped to 44.9 but increased again in the second half of the decade to an average of 51 million pounds. In 1970, exports to the U.S. climbed to 59 million pounds and in 1971 reached the record level of 66 million pounds.

The 51 million pounds per year exported to the U.S. in the 1965-69 period were valued at an average of \$27.3 million. These exports represented about 92 percent by weight, and 91 percent by value of all Canadian pork exports during this period.

Canada's off-shore exports have not been large since the end of the British agreement but recently have shown appreciable increases. During the 1965-69

^{1/} All tables are grouped in a Statistical Appendix at the end of the report.

period exports to countries other than the United States averaged only 4.6 million pounds. This level was down somewhat from previous years even after accounting for the concessional sales made in the 1959-63 period.^{1/}

In 1970, off-shore exports increased to 10.3 million pounds and in 1971 climbed to 28.8 million pounds. Increased sales in each year were primarily due to sales to Japan. In 1970, exports went to 24 countries other than the U.S. Of the total of 10.3 million pounds sold off-shore, Japan accounted for 6.4 million, the United Kingdom 876 thousand, Jamaica 828 thousand and New Zealand 629 thousand.

Total Canadian pork exports during the 1965-69 period accounted for approximately seven percent of Canadian pork production. Pork exports are primarily in the form of cuts, however, and the importance of the export market varies by type of product.

Exports by Type of Product

Products exported to the U.S.:

Fresh and frozen. This group of products is by far the major category of pork products exported to the United States (Table 2). As early as 1953 this category accounted for 60 percent of the total. During the 1965-69 period, 85 percent of exports to the U.S. were fresh or frozen; in 1969 and 1970, the percentages were 89 and 91, respectively. The absolute level of exports of

^{1/} During 1958-59, a period of exceptionally high production levels, the federal government, through the Agricultural Stabilization Board, purchased 56 million pounds of frozen pork. Almost all of this was held until 1959-60. In 1959-60 the Board's purchases amounted to 128 million pounds of frozen pork cuts, 114 million pounds of canned pork luncheon meat, and eight million pounds of canned hams. These supplies were disposed of during the period up until 1963, largely through exports at concessional prices. In January 1959, the Board discontinued its "offer-to-purchase program" for hogs and pork products and shifted to a deficiency payment plan of support. From 1960 to 1970 prices of hogs were above support levels and no deficiency payments were made.

fresh and frozen pork averaged about 20 percent higher in the second half of the 1960's than in the first half.

The single most important pork cut exported is fresh or frozen heavy hams. As discussed later, these hams go to a specialized market in New York City. In 1969, hams accounted for 90 percent of fresh and frozen exports and 80 percent of all pork exports to the United States (Table 3). In 1970, exports of hams dropped to 75 percent of fresh and frozen, and 68 percent of total sales to the U.S. The change in percentages was caused primarily by the increased sale of other fresh cuts; the absolute level of ham sales increased.

Bellies are the second most important fresh or frozen product exported to the U.S. and the second or third most important of all products. The limited data of Table 3 suggest that the exports of bellies and other fresh or frozen products vary appreciably from year to year.

Processed. Processed products (excluding canned) is the second most important category of pork exports to the United States. In the 1965-69 period this category accounted for 12 percent of total exports to the U.S. Since 1957 the level of sales has shown little trend around an average of about six million pounds. In 1964 and 1965, however, sales exceeded eight million pounds and in 1969 and 1970 they dropped to an average of about 4.6 million pounds.

The largest and most stable component of the processed exports has been "bacon and sides". This category accounted for 61 percent of processed exports in the five years 1965-69 (Table 4). In 1969 and 1970, "bacon and sides" accounted for about 70 percent of the processed category and about six percent of all pork exports to the U.S. (Table 3).

Exports of the other processed products - cured hams, boiled hams, and other cooked and cured pork - fluctuate greatly from year to year (Table 4). These products represent a small proportion of total exports and, except for "pork cured" appear to show some downward trend in absolute level.

Canned. Hams are the major canned product exported. Canned exports, however, are now a minor item. Since the mid 1950's these exports have decreased appreciably both in absolute quantity and, of course, as a percentage of all exports to the U.S. (Tables 2 and 3).

Products exported to other countries:

Exports to off-shore countries by type of product are listed in Table 5. Omitting the years 1959-63 when exports included concessional sales, the data in this table indicate that off-shore exports of processed products during the 1960's were appreciably below the levels of the 1950's. These data also indicate a continuing decline in all important processed products throughout the 1960's. The most significant drop over the period was in "pork cured" (mainly pickled) which goes primarily to the West Indies.

Off-shore exports of fresh and frozen pork, however, have increased sufficiently in recent years to provide the increase in total off-shore exports. The principal factor in this increase has been the sale of frozen pork, mainly boneless backs, to Japan. In 1970, 90 percent of off-shore exports were fresh or frozen.

Exports to the United States by Origin and Destination

Roughly 99 percent of Canada's pork exports to the United States is shipped to four regions. About 75 percent goes to the Mid Atlantic region, 15 percent

to the Pacific region, and virtually all the rest goes into the East and West North Central regions (Table 6 and Figure 1).^{1/}

The geographic origin and distribution of shipments vary by type of product. For example, virtually all heavy hams, from both Eastern and Western Canada, go to New York City (Mid Atlantic region). Processed products, on the other hand, move primarily to regions relatively close to the originating region.

In brief, the geographic distribution of exports in 1970 was roughly as follows (see Tables 7, 8 and 9 for detailed figures):

Eastern Canada: 95 percent of the fresh and frozen and 63 percent of the processed exports went to the Mid Atlantic region; virtually all the rest of the exports in these two categories went to the East North Central region.

Western Canada: 70 percent of the fresh and frozen and none of the processed exports went to the Mid Atlantic region; 21 percent of the fresh and frozen and 87 percent of the processed exports went to the Pacific region; virtually all the rest went to the West North Central region.

About 65 percent of Canada's total pork exports to the United States in 1970 originated in Western Canada. By category of product, Western Canada accounted for 69 percent of Canada's fresh or frozen exports and 25 percent of total processed exports. For Canada as a whole, nearly 75 percent of pork exports to the U.S. went to the Mid Atlantic region and 15 percent to the Pacific region.

^{1/} Available data on shipments, as indicated in the tables, is for region of lading in Canada and destination of shipments. Product could have been transhipped at either end but these broad regional classifications probably give an accurate picture of actual origins and destinations.

Canadian Pork Imports

Trends in Aggregate Imports

Canada also imports appreciable quantities of pork. The United States is by far the major supplier of these imports. Between 1952 and 1960, a severe outbreak of vesicular exanthema in the United States led Canada to prohibit the importation of any uncooked pork, nearly all the pork imported from that country. By 1961, however, imports from the U.S. were 41 million pounds (Table 10). Between 1961 and 1969, the level of imports from the U.S. ranged from a low of about 27 million pounds in 1965, 1966 and 1967 to highs of 87 million pounds in 1963 and 67 million pounds in 1969. In 1970 and 1971, imports from the United States dropped to 23 and 14 million pounds respectively.

Imports from off-shore countries were negligible until 1965 when imports of canned luncheon meat from Europe became significant (Table 10). Except for 1967, off-shore imports have since totaled roughly eight to nine million pounds each year.

Imports from the United States by Origin and Destination

About 76 percent of the fresh or frozen imports from the U.S. in 1970 entered eastern Canada (Table 14). In 1969, the level was 80 percent. All the processed (excluding canned) pork imports entered eastern Canada in both years. The data of Table 14 provide additional details by type of product for 1970.

Imports by Type of Product

Fresh and frozen pork has been the major category of imports from the United States throughout the 1960's. This category also has been responsible for

nearly all the annual variation in imports. The major fresh and frozen cuts imported in 1969 and 1970 were hams, bellies, shoulder cuts and spare ribs (Table 12). Other fresh or frozen items, including carcasses and sides, clearly can be very important in some years.

Imports of U.S. processed pork have been fairly constant at 9 to 10 million pounds a year since 1965. Cured fat backs has the largest volume followed by bacon and cured sides (bellies). Shoulders, picnics and butts, combined, make up most of the balance. There is a very small movement of canned pork from the U.S. to Canada.

Ireland and Northern Ireland^{1/} are the only off-shore countries which can ship uncooked pork into Canada (or the U.S.). Between 1968 and 1970, fresh and frozen imports from these countries have averaged about two million pounds (Table 13).

The major product imported from off-shore countries is canned luncheon meat from Denmark (Table 13). In 1970, 4.7 million pounds of Danish canned luncheon meat were imported compared to 6.8 million pounds in 1968. These imports were negligible, however, prior to 1965.

Canada's Trade Balance

In balance, Canada has been a net exporter of pork for all years since 1950 except 1963 and 1969. For both of these years, and 1964, imports from the U.S. exceeded exports from Canada to the U.S. During the four years 1965-68 when Canada was a net exporter to the U.S., the average margin was 21.7

^{1/} Imports from Northern Ireland are listed as United Kingdom imports in Table 13.

million pounds. However, with respect to pork trade with off-shore markets, Canada was a net importer in 1965, 1966, and 1969 by an average of 4.4 million pounds.

In 1970, Canada had a net export balance of 35.8 million pounds with the U.S. and 2.4 million pounds with off-shore countries^{1/}.

United States Pork Trade

Exports

United States pork exports have shown no definite trend in recent years (Table 15). From 1966 to 1970, exports averaged 78.6 million pounds (excluding lard), less than one percent of U.S. pork production (Table 15)^{2/}.

^{1/} Two by-products not included in this trade summary are lard and offal. Canada's imports of lard averaged 20 million pounds in the 1963-67 period. Lard production during this period averaged about 125 million pounds. In 1970, lard imports were 20.8 million pounds valued at 2.5 million dollars. Almost all lard imports are from the U.S.

Canada's exports of total offal, which includes a by-product of pork, has been rising in recent years and in 1970 totaled 52.9 million pounds valued at 11.4 million dollars. In 1970 the main outlets for offal were the United Kingdom at 22.4 million pounds, and the U.S. at 17.2 million pounds. Import of offal in 1970 totaled 6.9 million pounds.

^{2/} Exports of lard from the United States for the 1961-65 period averaged 461.9 million pounds a year and in 1966-70 averaged 229.8 million pounds annually. In 1970 exports increased to 365.9 million pounds at a value of 45.5 million dollars, compared with 261.5 million in 1969.

The United Kingdom has been a traditional market for U.S. lard, accounting for over 70 percent of exports. In recent years the EEC has taken over a larger share of the U.K. lard market through export subsidies, and Danish lard has remained very competitive in price. In an effort to counter the EEC export subsidies, the United States initiated a lard export subsidy program in January 1969.

Since 1960, there have been years when more than half of total U.S. exports of pork have been to Canada. As indicated above, most of the U.S. pork sales to Canada are fresh or frozen and primarily enter the pork deficit areas in the eastern provinces.

During most of the 1960's, the level of pork exports from the U.S. has varied almost directly with the level of exports to Canada. For example, in 1963, 1964, and 1969 Canada's imports from the U.S. were at relatively high levels and total exports from the U.S. moved up sharply.

The higher levels of U.S. pork exports in 1968 and 1969, however, were due to a sharp increase in pork sales to both Canada and Japan. U.S. exports of fresh or frozen pork to Japan in 1967 were virtually nil, increased to 23.6 million pounds in 1968, 56.6 million in 1969, and then dropped to 16.1 million pounds in 1970. In other words, during the 1968-70 period U.S. exports of fresh or frozen pork to Japan about equalled exports in this category to Canada.

Imports

U.S. imports of pork have increased steadily during the past decade (Table 16). The average quantity imported during the five year period, 1956-60, was 160 million pounds a year. By 1961-65 the average increased to 212 million, and for 1966-70 the annual average was 318 million pounds.

Imports of pork into the United States in 1970 were equivalent to about 3.3 percent of U.S. production. This level is not as high as the corresponding figure for Canada, although it has been growing; in 1960, U.S. pork imports were equivalent to only 1.6 percent of production.

The U.S. was the world's second largest importer of pork, in terms of absolute quantity of imports, during most of the 1960's. In 1969, it was third behind the United Kingdom and France.

Currently about 15 percent of the pork imported into the U.S. can be classified as fresh or frozen (Table 16). The proportion of fresh or frozen has decreased since 1956-60 when it was about one-quarter. Canada is the main source of U.S. fresh pork imports.

Over 80 percent of U.S. imports are canned (Table 17). Canned hams and shoulders alone account for over 70 percent of total imports and are of growing importance. The canned hams are mostly premium items; they are considered to be of higher quality than their U.S. counterparts and usually sell at higher prices than do similar U.S. products.

The main source of canned pork imports (hams, shoulders, bacon, and pork luncheon meat) is Denmark, followed in importance by the Netherlands, Poland, and Yugoslavia (Table 17). The United States takes more than 70 percent of Denmark's exports of canned hams and shoulders. Nevertheless, less than one percent of total U.S. pork consumption is of Danish origin. Denmark at 1.1 billion pounds (carcass weight equivalent), followed by the Netherlands at 504 million pounds, and Poland at 265 million were the world's largest pork exporting countries in 1969.

Canada's relative position as a source of U.S. pork imports has declined sharply in recent years (Table 16). Canada was the source of 30 percent of U.S. pork imports during 1956-60, 22 percent in 1961-65, and only 16 percent during 1966-70. The sharp increase in imports of canned pork from Europe

combined with little change in imports of fresh-frozen pork from Canada explains Canada's declining relative position as a source of U.S. pork imports.

Trade Balance

In the 1966-70 period, the U.S. annual average trade deficit in pork was 240 million pounds, up appreciably from the average deficit of 91 million pounds in the 1956-60 period. Neither pork imports nor exports, however, are as significant to the U.S. pork economy as they are to Canada's.

North American Trade Balance

On balance, North America (Canada and U.S. combined) is a net importer of pork and pork products. For 1970, excluding lard, exports totaled 48.6 million pounds and imports were 296.8 million pounds for a trade deficit of nearly 250 million pounds.

CHAPTER 4

CANADIAN PORK PRICES AND CANADA-UNITED STATES TRADE

The annual fluctuations and trends in Canada's pork exports and imports to the U.S. discussed in the previous chapter are determined by a number of factors. This chapter discusses the role of price, both as it affects and is affected by this trade.

A "North American" Market

To a very large degree, Canadian and American pork producers and packers share a common market. Canadian and American producing areas are geographically located near major consuming areas of both countries.

Although, as discussed later, the border does at times produce greater uncertainties and expenses than within country shipments, no quotas exist on pork trade and tariffs are a minor factor (Table 18). The levels of trade in pork products discussed in the last section are evidence of the degree to which each country operates on a "North American" market. Perhaps even stronger evidence is the variability in the levels of trade over time.

Changes in the level of shipments of any product operating in a "free market" reflect changes in levels of demand or supply. The variation in levels of trade in fresh pork, in particular, would be expected to reflect changes in the relative levels of production and price between the two countries.

Trade in (branded) processed products would be expected to react more slowly to price changes.

Annual production, price, and trade data (Table 19) do not clearly show these kinds of relationships, but note the large variation in U.S. exports

compared to Canadian exports. As is well known, annual data mask important within year changes in quantities and prices, trade is predominantly in the form of cuts, not carcasses^{1/}, and some lags in response of quantities to price changes would be expected. Additional work is planned to examine in more detail, the factors influencing trade levels.

Canadian and United States Prices

The price data in Table 19, show the important point that the broad cyclical swings in prices coincide for the two countries. Clearly, if the price in Canada were for some reason to rise above the U.S. price by more than the small transfer costs involved, imports would enter in sufficient volume to reduce the margin to the level of the costs of moving pork into Canada. Conversely, the opportunity to export pork (and live hogs) to the U.S. ensures that the Canadian price will not fall far below the U.S. price for any appreciable length of time.

One important factor in international price relationships is the exchange rate. Between May 1962 and May 1970, the Canadian dollar was pegged at 0.925 U.S. dollars. On June 1st, 1970, the exchange rate was allowed to float and currently the two currencies trade on approximately even terms. This upward evaluation of the dollar created a good deal of concern at the time. Short term transactions can be hedged but longer term export or import plans must assume some level of exchange.

^{1/} As indicated in Chapter 3, however, carcasses can be imported at times. When Canadian supplies are relatively low, most cuts would be in demand. Also, importation of carcasses provides employment for plants which otherwise would be operating with appreciable excess capacity.

The major effect of the new exchange rate with the U.S. was to reduce the average level of Canadian prices relative to U.S. prices; both the "import ceiling" and "export floor", provided to Canadian prices by trade with the U.S., were reduced about eight percent.

Regional Price Differentials

The competitive position of individual producing regions in the North American market, however, also depends on their proximity to the major consuming regions. In the United States, the Corn Belt (roughly the East and West North Central regions, Figure 1) produce approximately 80 percent of total U.S. hog slaughter. The major population centers, of course, are on the Atlantic and Pacific coasts. The result is that pork prices are lowest in the North Central region and highest on the coast. The broad pricing pattern, as represented by one interviewee's interpretation of the way the National Provisioner's "Yellow Sheet" is used to price pork, is roughly as outlined below. All prices are in U.S. dollars per 100 pounds, basis Chicago; prices paid on shipments from Iowa and Nebraska are \$0.50 per cwt. below Chicago.

- (a) New York: plus \$1.50 if trucked, or \$2.00 by rail.
- (b) Boston: plus \$1.70 if trucked, or \$2.00 by rail.
- (c) Florida: plus \$2.00.
- (d) Los Angeles or Seattle: plus \$2.50 to \$3.00.

In Canada, the major "surplus" hog producing region is the Prairies. Although, as indicated above, the general level of prices in Canada is kept in close alignment with the U.S. price, the lowest Canadian prices in Canada are in the

Prairies and the highest in the east. The average price differential between Toronto and Edmonton over the 1966-69 period was \$3.14 per 100 pounds, carcass weight, Grade A or Index 100 hogs.

The major implications of the above geographic production, consumption and price pattern is that, other things equal, Alberta is well situated to ship to U.S. west coast markets; Manitoba must compete "head-on" with the U.S. Corn Belt, and Eastern Canada, although located near major markets, also faces strong price competition from nearby Corn Belt producers.

Price and Quality Differences

As clearly indicated by the price data in Table 19, Canadian pork prices average higher than U.S. pork prices. Two closely related reasons for Canada's ability to export (in addition to the geographic one mentioned above) are the difference in "quality" between Canadian and U.S. pork and difference between Canadian and U.S. consumer demand for particular qualities and cuts. These factors are discussed in the following chapter.

CHAPTER 5

THE INFLUENCE OF QUALITY ON CANADA - U.S. TRADE IN PORK

Generally, Canadian pork sold in United States markets has brought a higher price than the average price for the same type of U.S. produced product. In some sense, therefore, these Canadian pork products must have superior characteristics to their U.S. counterparts as viewed by American buyers. In addition, U.S. imports into Canada are often sold at a lower price than the corresponding Canadian product, although imports from selected U.S. suppliers are equal to "house run" Canadian products.

Characteristics of the Hog and Pork Quality Differential

The major advantage enjoyed by Canadian pork is its relative lack of intermuscular fat. This characteristic is especially important in the heavy ham trade to New York City. Consumers, prefer a lean product. This preference is influenced both by diet and appearance. If intermuscular fat is present in the ham, it must be removed - an expensive and not entirely successful process. The Canadian ham also tends to have finer textured and firmer lean and better color than the typical U.S. heavy ham.

The exports of bellies and processed side and back bacon likewise are based on their relative lack of fat. The side bacon, for example, has a higher proportion of lean to fat and hence less "fry-away" when cooked.

Canadian hogs also have less backfat on the average than American hogs. On carcasses of the same average weight, therefore, the Canadian carcass will yield a higher percentage of the five trimmed wholesale primal cuts (ham, loin, belly, butt and picnic).

Associated with the leaness of the Canadian hog, however, are some disadvantages. The lean market hog is achieved in part by marketing it at a lighter weight; the average liveweight in Canada is about 208 pounds and in the U.S. about 235 pounds.^{1/} As a result the size or weight of individual cuts from the average Canadian hog is lower. Since processing costs for a ham, belly or other cut are largely independent of the weight of the cut, processing costs would be higher per pound on the Canadian product, other things equal.

In addition, hams are a smaller percentage of the weight of primal cuts in Canadian than American carcasses. The loin eyes are smaller and in some cases the bellies are too thin (or "skippy"). These factors are especially important in the live hog trade from Alberta to the U.S. Pacific Northwest.

Other "quality" characteristics of meat such as tenderness, juiciness, and flavor are difficult to evaluate. If these attributes are positively related to the amount of marbling (e.g. in pork chops) there could be some differences between U.S. and Canadian products, but the difference would be minor.

Trends in the Quality Differential

Given the importance of superior quality to Canada's level of exports, the question is whether or not Canada can maintain this quality advantage. A related question is whether some of the apparent disadvantages can be overcome.

^{1/} Average weight of barrows and gilts at 8 markets as reported in Livestock and Meat Statistics Supplement for 1969 to Statistical Bulletin No. 333, U.S.A., Washington, D.C.

The Canadian grading and pricing system, which is based on carcass grades and includes substantial price incentives for lean meat, is the basis for Canada's superior pork quality.^{1/} The production of lean pork, however, is expensive. To some extent the Canadian emphasis on quality is the outgrowth of management practices required by climate, of the types and costs of feeds available, the traditional emphasis on export markets, and characteristics of domestic demand.

The grading and pricing system has been revised from time to time and the present system is subject to periodic review.^{2/} Perhaps it requires some modification to put more emphasis on increased size of cuts; such a change might well improve the export potential for pork and live hogs. At the same time, however, the major market for Canadian pork is the domestic market. This market apparently prefers smaller cuts, (for example, hams under 18 pounds) and the Canadian grading system, of course, should reflect the preferences of this market. In fact, differences between Canadian and U.S. demand for, as well as supply of, the various "qualities" and "sizes" of pork products is a key factor in present trade patterns.

The average quality of pork marketed in the United States has improved appreciably in the past decade. This improvement has been due to better management practices, emphasis on the "meat-type" hog, and improved merchandizing of pork. The best U.S. hogs now are probably superior to the best Canadian hogs in terms of producing large yet lean hams and loins. In addition, some of the smaller meat packers specialize in producing better than average products for selected outlets and the larger firms each have

^{1/} In addition to market grade price differentials, a quality hog premium was paid by the federal government for a number of years and several provinces currently pay premiums on hogs over a specified index level.

^{2/} The present index system was initiated in January 1969.

premium lines. Producer-packer contracts are sometimes used, especially in the newer less tradition oriented producing regions, to provide a premium to producers of better than average quality hogs.

Three other factors tending to reduce differences between the two countries in pork quality are the interchange of breeding stock,^{1/} the increasing use of corn for hog feed in eastern Canada, and the decreasing difference in average live weights. (The average weight of Canadian hogs is increasing gradually; some U.S. packers pay a premium for hogs in the 210-220 pound range, a range above the Canadian average but below the U.S. average weight.) A fourth factor which could have some significance for the quality of pork produced in the U.S. is a trend in swine raising to a somewhat greater degree of confinement.

There appears to be general agreement in the United States that any additional significant increase in the overall average quality (leaness) of pork is dependent on a change in the marketing system which will provide producers with the price incentive to produce lean pork. At present hogs generally are purchased on a liveweight basis. In 1969, for example, only 4.3 percent of all packer purchases were on a carcass grade and weight basis.^{2/} Also, many packers use their own set of grades. The U.S. marketing system is essentially geared to the mass production of pork with relatively little emphasis on "quality". This system is, in one sense, very flexible; possible producer-packer arrangements are numerous and more packers could become interested in the relatively limited premium pork market. Any

^{1/} In 1970, Canada exported 1,293 head of breeding stock to the U.S. and imported 2,855 head from the U.S.

^{2/} United States Department of Agriculture, Packers and Stockyards Resumé, Vol. VIII, No. 13, December 1970, Washington, D.C.

overall change in the well established live basis of selling the great bulk of U.S. hogs, however, is generally considered very unlikely in the foreseeable future.

Quality of Packaged Products Exported

During the interview survey in the United States the image of Canadian pork products and their quality in the U.S. appeared to be excellent in the majority of cases. In particular, the San Francisco, Los Angeles, Minneapolis - St. Paul, Detroit, and New York markets appear receptive to Canadian pork products. These markets have been serviced for a considerable time with high quality Canadian products and the relationship between buyer and seller appeared to be good or improving.

In reviewing the quality and distribution of cryovac, prepackaged pork consumer items, however, many problems were apparent. On several U.S. west coast markets, Canadian package bacon was found to be stale, poorly packaged, and in addition "leakers" were still to be found in retail shelves. In midwest markets sliced side bacon from Canada was considered to be of good quality, but some criticism was made of an excessive use of "tear" pieces. The "see through" pouch package utilized in these markets by some Canadian packers for back bacon was clearly unsatisfactory - one retailer interviewed said that he was discontinuing a Canadian line because of this factor.

CHAPTER 6

MARKET DEVELOPMENT

The three previous chapters have outlined in broad terms the level of Canadian trade with the U.S. and the underlying supply, price, and quality factors associated with this trade. This chapter examines the effect of these and other factors such as promotion and product development on the potential for increasing exports to U.S. markets.

Stability of Supply

Any effort to expand export sales is dependent on the availability of a reliable supply of product at a competitive price. As indicated above, characteristics of leaness and texture make some Canadian products worth more to U.S. consumers and processors than corresponding U.S. products. In this sense, "competitive price" includes the "premium" for recognized quality that U.S. buyers are willing to pay. The willingness to pay such a premium has been demonstrated. If short supplies in Canada force the price differential too high, however, no sales will be made, or, if the export price is maintained, the sales will be made only at a loss to the exporter.

In the case of developing outlets for processed products, stable supplies are crucial. Volume is built up on the basis of repeat sales to those who have tried a product and like it. A store does not have to be out of stock often before the customer moves on to some other brand, and perhaps to some other store.

Virtually all persons interviewed on the question of market potential emphasized the importance of an assured, competitively priced supply. To paraphrase one Canadian packer:

We are very enthusiastic (and optimistic) about export possibilities to the U.S. (and elsewhere). There is no limit. We are aggressive but can't justify any sizeable expansion unless there is better evidence that Canadian farmers are prepared to consistently produce sufficient weekly gradings to keep us on or close to an "export basis". The Number One problem is that hog gradings are not kept at a sustained high level. Otherwise, what are we going to sell in the U.S.? What products can we promote in that market?

One of the U.S. brokers made the point essentially this way:

The higher quality is recognized and there is a premium for your product, but your supply is too inconsistent. You offer product and it sells without difficulty. But before we can establish what the premium might be or could be built up to, based on cut-out, color, taste, etc., a short supply always sets in. If you are going to service this market, then you will have to make up your mind to raise enough hogs to supply regular accounts on a 52 week basis -- the buyers simply have to be assured of a regular supply at price levels competitive with the Midwest plus the quality premium on Canadian product. I would sure like to take a whirl at it on a sustained basis.

Product Promotion

The two most important methods of promoting Canadian products are the promotional allowances given retailers by packers and trade promotions sponsored by federal and provincial governments. Each of these methods has its limitations.

Promotion as a means of stimulating export sales, is limited primarily to processed products. Fresh and frozen pork generally loses its identity as Canadian by being processed into products sold under the label of the U.S. firm. The questions of whether additional promotional work would be

profitable, what kind should be done, and who should pay for it, have application primarily to the sale of Canadian branded processed products.^{1/}

Probably the most common means of promoting their products in the U.S. by Canadian firms is the provision of promotional allowances to retailers. A certain amount of money per pound of product bought by the retailer is made available by the seller for newspaper advertising, in-store displays, etc. When retailers advertise high priced products, they want assurance that the prices will be in line with quality, and that the product will be available in the quantities needed for the promotion and follow up sales. In other words, nobody wants to advertise high priced products especially for products on which they may not be able to deliver.

The most important government method of promoting Canadian products, at both the federal and provincial levels (where the emphasis would be on products of the province in question), is through trade fairs or food shows of various types. Comments made during the interviews indicated that the products shown at these fairs often were of excellent quality but efforts by potential buyers to follow up with orders encountered problems of price or supply commitment.

Factors which would tend to complicate the promotion of "Canadian pork" as distinctive from U.S. pork include; a tendency by consumers not to distinguish Canadian products as being "imported"; the use of the term "Canadian bacon" to refer to all back bacon and the labelling of back bacon as "Canadian style" back bacon; and the use of the maple leaf as a registered trade mark of a major Canadian meat packer.

^{1/} This discussion of promotion excludes the type of selling effort done by company salesmen, brokers, etc. In the case of governments, the discussion also excludes many efforts made to assist exporters and potential importers with information of various kinds.

Canadian processors suggested three areas in which governments and producers could assist in the promotion of pork products in the United States:

- (1) Providing financial incentives to co-operating retailers in the United States.
- (2) Promoting an individual item in a metropolitan area where studies have shown that such action should be effective.
- (3) Providing financial assistance to individual firms introducing and promoting an item into the U.S. market.

Generally, the packer finds that the limited volume that can be moved does not justify much expense, if any, for advertising. This means that the amount spent is usually not sufficient for effective results.

Product Competition and New Products

Hams and back bacon are two items for which product competition is of special significance for Canadian exporters. In both cases, new products are being developed.

Hams

As indicated in Chapter 3, the major Canadian export item is heavy hams to New York City. These hams are primarily in the 18 to 25 pound range and are fresh or frozen, bone-in "fresh" hams. They possess qualities of leaness and texture which command a premium in this market. About eight to 10 processors in New York City use these hams to produce a deluxe pear-shaped boiled ham and an oblong "round top" boiled ham. Both types are "water added".^{1/}

^{1/} Virtually all U.S. produced hams are labelled "Water Added" to indicate up to a 10 percent increase over green weight.

These boiled hams are sold through delicatessens at premium prices; they have better eye appeal in the delicatessen than domestic hams or imported canned hams. They also are sold to the "sandwich" trade. Hotels and restaurants, however, prefer foreign canned hams for slicing, and chains are not "volume interested" in this special type of boiled ham.

Canadian packers say the New York boiled ham trade will take virtually all hams which meet the above specifications. The New York processors indicated a preference for fresh over frozen hams, the use of "combo bins"^{1/} rather than boxes, and half-skinned rather than the skin-on Canadian cut.

As also indicated in Chapter 3, the major U.S. import item is canned hams from Denmark, the Netherlands, Poland, and Yugoslavia. An upward trend in the level of canned^{2/} exports from these countries to North America is generally anticipated because of expected increases in their levels of pork production and the importance to them of canned meat exports as a source of foreign exchange.

The canned ham market is composed of three types of product; (1) hams for slicing, (2) pasteurized dinner hams, and (3) small (1, 2, and 3 pound) sterile hams. Imported hams dominate both the sliced ham and sterile ham markets.

The ability of the European canned hams to compete in the U.S. appears to be based on both the quality of their product and their marketing - pricing system. The Danes, for example, start with a special species of hog designed for the

^{1/} See section on Transportation Services in Chapter 7.

^{2/} European exporting countries cannot ship any meat product that is not fully cooked into North America because of foot and mouth disease. This disease is endemic and the European countries have control programs rather than eradication programs for it.

"Wilshire-side trade". Small production units and careful feeding and management practices ensure the production of lean pork. In addition the hams are severely trimmed. Sophisticated canning techniques result in a uniform, attractive product that is practically free of fat.

The canned hams for slicing are primarily oblong in shape so that little waste results from the slicing operation. The most popular size is 11 pounds and produces 4" x 6" slices. The hams are sliced in the U.S. by specialized slicing plants some of which are owned or under contract to the exporting country. The sliced product is commonly sold in retail stores in vacuum packages which clearly display the quality of the product.

The European canned hams sell in the U.S. at "premium" prices. Whether the prices received cover the total costs of producing these products is questioned by some people but all agree that U.S. processors cannot match the quality of the imported hams at the prices charged. In addition, some countries provide buyers with significant short term price protection. Denmark, for example, offers a "slump and boom" clause which protects the buyer from price increases between the sale date and his use of the product, and gives him the benefit of price decreases during a specified but roughly equivalent period.

The quality advantages of Canadian hams over U.S. hams could provide Canadian processors some edge over their U.S. counterparts in competing for the U.S. canned ham market. Canadian processors have recently developed a rectangular canned ham for slicing and an improved 5 pound canned ham for consumer use, and are working on other ham products. Canadian packers report, however, that with a few exceptions involving small tonnage, the net return to the Canadian packer from selling fresh or frozen heavy hams to the New York boiler trade is

greater than from exporting canned hams.

Back Bacon

"Back bacon" in the United States is called "Canadian style bacon". It is a smoked product made from boneless backs out of 17 to 25 pound loins. The major producer of the product makes round "sticks", 3 1/4 inches in diameter, and rectangular "sticks". Some of the sticks are sold to the hotel, restaurant and institutional trade. The bulk of the sticks are made into vacuum packed "chunks" for sale to retail stores. Other firms produce sliced Canadian style bacon of a larger diameter using the tumbling process.

Increases in consumption of Canadian style bacon in the U.S. appears to be about in line with population growth. The product is not too different from smoked ham and is not closely associated with "breakfast bacon".

At present some "genuine" Canadian back bacon, is being sold in the Pacific Northwest and is being introduced into California by western Canadian packers. Some eastern Canadian packers are also making and exporting the product.

Canadian exporters believe there is good potential for increased export of "genuine" Canadian back bacon. The Canadian product is leaner and has better color (less marbling in the Canadian backs tends to produce more uniform color). The Canadian "sticks", however, are lighter in weight and smaller in diameter than the U.S. product.^{1/} The higher processing and marketing costs per pound resulting from the smaller unit size of product, and the higher average price

^{1/} The smaller size of Canadian loins relative to U.S. loins results in the smaller sizes of the "sticks". This size factor also makes the Canadian loin unacceptable to the U.S. processors of Canadian style bacon.

for backs in Canada may limit opportunities for substantial export trade. Canadian "chunks" must be delivered to the U.S. retailer at a price not too far from the price paid for "Canadian style" bacon.

Other Products

Discussion has been limited to a few comments on the market for hams and back bacon. Product competition and the development of new products is of special importance to pork trade because such a high proportion of consumption is in the processed form. New products are continually being developed and the two mentioned are not the only ones for which opportunities exist.

Regional Markets

The purpose of this section is to briefly note some of the regional characteristics of the U.S. market. Except where noted, the other sections of this report apply to all regions.

Pacific

The Pacific region obtains the bulk of its pork supplies from Minnesota, Iowa, Nebraska, and the Dakotas. Pork prices, and retail margins, are relatively high, especially toward the south. Retailers in the southern part of the region are generally more receptive to speciality meat items and gourmet foods.

The Seattle-Tacoma area appeared to be a conservative, traditional market. Several Canadian packers had resident salesmen in the area and at least two marketed a full line of processed meats. Fresh sausage and sliced bacon were two of the more successful Canadian products sold in this area. After

the sharp drop in U.S. pork prices in 1970 the smaller volumes sold were handled through brokers. The greatest potential in this area appeared to be in live hogs and fresh pork items which could be processed locally.

A variety of Canadian pork products are sold in San Francisco and a relatively small quantity in Los Angeles. Los Angeles is a large market, but the variety of population and income groups geographically dispersed over a large area, and the large number of retail outlets makes distribution particularly difficult. Sales and promotional efforts in this area would be most effective in terms of individual retail firms rather than a mass media approach. Los Angeles is the major market on the West Coast for Danish products.

North Central

The Minneapolis - St. Paul area appeared to be receptive to imported products and there was good distribution of Canadian products in retail food stores. Some Canadian products also are sold in the lower Great Lakes markets; Detroit, appeared to have the best potential of this group. Cities such as Chicago, Cleveland and Cincinnati appeared less receptive to imported products. With few exceptions, the close proximity of all these cities to the U.S. Corn Belt will make appreciable growth in exports to them extremely difficult.

Mid Atlantic

New York City, of course, is the major export market for Canadian products; the ham market was discussed above. New York is a large, wealthy, cosmopolitan

center within convenient reach of eastern Canadian processors. There is a strong demand for quality products. On the other hand, the U.S. Corn Belt also is not far distant. In addition, large highly specialized processors are located in the market area, and local distribution costs are high. These comments also would apply in general terms to other large cities in or near this region such as Philadelphia and Boston.

South Atlantic

The small volume of Canadian product sold in this region is apparently well received but prices are considered to be too high. Meat from the U.S. Corn Belt is shipped into the south at very favorable rates as a backhaul for fruit and vegetable shipments to the north.

CHAPTER 7

THE EXPORT MARKETING SYSTEM: MEAT INSPECTION, TRANSPORTATION, DISTRIBUTION

The logistics of moving a meat product from the plant to the consumer involves a rather complex system in order to ensure that the desired product arrives at the desired time and place and in a form and condition which meets the buyers' needs. When the product must cross an international border, the regulations and trade practices of two countries must be met. This section discusses three aspects of this system - meat inspection, transportation, and distribution.

Meat Inspection

The term "meat inspection" covers several related regulatory activities designed to ensure that the meat purchased by consumers is free of any injurious organisms or additives and that the contents of a packaged product are as stated on the label. Three activities briefly discussed here are the inspection of meat plants, the inspection of meat products, and label requirements.

No one quarrels with the objectives of meat inspection. As in the case of any regulatory program, however, questions sometimes arise about the procedures used to implement the program. In the case of internationally traded goods, the possible use of such regulations by a country to restrict imports adds to the sensitive nature of enforcement procedures.

Plant Inspection

Under the U.S. Wholesome Meat Act, meat may be imported into the United States only from countries with meat inspection systems certified as equal to the

U.S. system. In addition, within the recognized countries only those plants which the foreign officials have certified as meeting U.S. standards can ship meat into the U.S. Faulty construction, poor sanitation, and failure to meet inspection requirements could disqualify a plant.

United States Department of Agriculture officials carry out periodic inspections to ensure compliance with the Act by foreign plants exporting to the U.S. If minor deficiencies are found which can and will be corrected, and no health hazard is involved, shipments usually are not stopped; if the situation is more serious authorization to export to the U.S. from the plant is removed.

Note that foreign plants are required under the Act only to meet standards placed on domestic U.S. plants. U.S. and foreign officials keep in close communication on the nature of these standards.

All meat packing plants in Canada which wish to ship products interprovincially are subject to the Canada Meat Inspection Act and the Meat Inspection Regulations. Any Canadian plant which conforms to these standards, that is, any federally inspected plant, is eligible to export meat. The Canadian meat inspection system has been certified by U.S.D.A. as equal to the American system. To be eligible to export to the United States, of course, each federally inspected plant also has to be inspected and approved by U.S.D.A.

Currently, all Canadian plants certified under the Canadian Act are eligible to export to the U.S. As of June 1, 1970, 85 of these plants slaughtered hogs and about 125 were doing some pork processing. Many of these plants

("establishments"), of course, had no interest in being approved for making exports to the U.S. Aside from the export of heavy hams there are only about eight firms (several with a number of plants) that export a variety of pork products to the United States.

Plant regulations under the Canadian and U.S. systems are very similar. The major concern of the Canadian meat packers interviewed was that the regulations could be changed on what seemed to them to be short notice. Unanticipated expenditure on renovations or new plant construction and new equipment can create serious short term financial problems. Some of the earlier concerns of the packers have been reduced, however, as experience has been gained with the U.S. regulations and procedures.

Product Inspection

In addition to originating in authorized plants, meat shipped into the United States must (a) be accompanied by a sanitary certificate, issued by qualified officials in the exporting country, certifying that the animals slaughtered, and their carcasses, were inspected and that the product is wholesome, free of contaminants and otherwise complies with U.S. requirements, and (b) be subject to inspection at the port of entry, or at the destination plant if the plant is federally inspected.

Pork imports into the U.S. from Canada (including luncheon meat) which passed U.S.D.A. inspection, totaled 55,711,634 pounds in the fiscal year 1970. Pork products which were refused entry amounted to 443,537 pounds^{1/}, or about 0.8 percent of the total submitted to inspection. This figure in a sense is

^{1/} United States Department of Agriculture, Consumer and Marketing Service
Meat and Poultry Inspection Statistical Summary for 1970. 80 (1970)

not large. According to comments by Canadian processors, however, this figure does not appear to reflect the cost of meeting the inspection regulations, the uncertainty created by them, nor their effect on the decision of whether to attempt to enter the export business.

The added costs of making an export shipment over a domestic shipment include administrative and labor costs associated with keeping informed about the regulations, preparing the export certificate, customs declarations and health certificate, marking boxes, etc. If a shipment is rejected at the border appreciable costs are incurred and sales are probably lost. Extra efforts, therefore, are often made to ensure that all administrative and product regulations are fully met.

The major source of uncertainty and concern in exporting "skin-on" products such as hams, bellies, picnics, hocks, skins and carcasses is application of the regulation that pork products must be free of hairs and other foreign matter. Occasional disagreement over the degree of evidence that constitutes a violation seems to be inevitable.

Inspection of processed, packaged and canned products includes laboratory testing to check adherence to compositional standards, to monitor for pesticide residues, and to subject canned products to incubation tests for signs of spoilage. Adherence to moisture level regulations apparently cause exporters some difficulties. The major source of uncertainty and expense, however, would appear to be the procedure followed if a sample is found unacceptable. Rather than informing the exporter immediately, the next shipment of the specific product is rejected at the border and three separate samples must be found acceptable before the product is again allowed entry.

In some cases, especially in the West, additional expenses are incurred because of a lack of inspection services at convenient ports of entry.

Labelling Requirements

As indicated above, one item checked by meat inspectors is whether the contents of a package agree with the label and whether the required forms accompany the shipment and are properly completed. They also check that the specific label used has been approved.

The Canadian (and U.S.) packers and processors advised that it is sometimes costly to have labels approved because of the time required - from one week for fresh or frozen products and up to a year or more for a private brand processed product. The possibility of delay in obtaining approval obviously would be a deterrent to a company's efforts to capitalize on a short term market situation. The time and uncertainty involved in getting approval for processed products also would appear to be of concern to those planning the development of a market on a longer term basis. Once accepted, however, only a change in regulations would require a new label approval.

Transportation Services

Transportation is obviously a significant cost of marketing any product. In addition to freight charges, long distance transportation of meat products results in added cost due to tissue shrinkage and reduced shelf life of products at the destination point. If freezing is required, both the costs of freezing and defrosting the products are incurred.

Technological Changes

Two developments which may significantly reduce these costs for fresh pork shipments are combo bins for handling and carbon dioxide to control temperature and oxidation. Polyethylene lined corrugated bins, called "combo bins", reduce handling costs and pilferage. Although in general use for domestic shipments in the U.S. and Canada, their use in Canada and for export shipments is relatively new.

The use of carbon dioxide to control the quality of fresh pork shipments is in the experimental stage. The implementation of this technique would not involve wrapping the product in wax paper and would extend the shelf life of the product by three to four days. Successful development of this technique would change the relative costs of Canadian and U.S. producers in reaching the various market centers.

Adequacy of Service

Canadian exporters encounter severe problems in obtaining adequate transportation service into U.S. markets. The problems differ somewhat between western and eastern Canada. In western Canada the problem is particularly severe. Products for which trade is well established, such as fresh and frozen hams going to New York, have no problems.

Western Canada: Inadequate transportation facilities are often the limiting factor in the decision to export to the Pacific Coast region.

The major problem facing exporters in Western Canada is that no Canadian common carrier is licensed by the U.S. Interstate Commerce Commission to transport meat into the U.S. As a result any shipment of packer-owned product moving from Saskatchewan, Alberta, or British Columbia into Washington, Oregon or California, must go through Vancouver where it is transferred to a U.S. trucker. The time required for such a shipment can be up to 10 days. This time factor, the extra handling involved and the difficulty of maintaining refrigeration reduce the shelf life of the delivered product. In addition, the use of two (or sometimes several) carriers makes the assignment of responsibility for the shipment difficult.

A related difficulty in shipping to the U.S. is that most plants do not do sufficient export volume to provide shipments of the minimum size (20,000 pounds) required to obtain the truck load rate. The major problem with less than truck load (LTL) shipments is the higher cost. The LTL rate to California points is ten to twelve cents a pound compared to four cents for full loads. An LTL shipment also generally requires more time to arrange, more time in transit, and more transfers than a full load shipment.

At times, truck load sales, and, in some cases, less than truck load sales, are made to trading firms which bring fruit and vegetables into Western Canada from the U.S. These sales are unsatisfactory from the point of view of market development because they provide little opportunity to learn about and respond to the needs of the markets. (The topic of distribution within market areas is discussed in the next chapter).

Eastern Canada: In eastern Canada (Ontario), there is no difficulty with full load shipments. Shipments of less than full loads, however, do encounter some problems.

Several trucking firms provide LTL service to a port of entry where the product is transferred to a U.S. carrier. However, there is apparently only one trucking firm consistently offering LTL refrigerated service to destinations in the U.S. beyond a port of entry. This firm provides a regular twice-a-week schedule to both New York and Boston with delivery on the third or fourth morning after the day of departure from an Ontario plant. LTL lots for some other destinations (e.g., Cleveland) have to be transferred at this firm's warehouse, in the U.S., for forwarding either by the same carrier or by another trucking line.

In the case of cities located at a port of entry such as Detroit or Buffalo, the trucking firms providing the LTL service to Ontario plants will move the product from the border point under bond to a local warehouse. Such a warehouse usually provides a distribution service to retailers in the surrounding market area.

LTL shipments from eastern Canada, of course, have the same problems of cost and delay in shipping as LTL shipments anywhere. The need for LTL shipments arises from the small volumes of (processed) product shipped into export market centers.

Distribution

Distribution within a market area includes the activities of making sales to retailers, getting the product into their store or warehouse at the time and in the quantities promised, checking on the retail display, and generally servicing the account.

The complexity of consumer demands in large markets like Los Angeles make direct sales to food retailers difficult. U.S. processors have the advantage of well established sales connections in these markets.

One major Canadian firm provides U.S. distribution through a subsidiary. The subsidiary firm has offices in New York and Los Angeles, and salesmen in several other areas.

Other Canadian exporting firms follow the general practice of making sales through meat brokers. Their export volume would not make the development of a company sales force practical. In some areas in the midwest these firms apparently were having some difficulty obtaining competent brokers with an interest in following through on the limited volume of Canadian sales. In the Pacific region, however, brokers were providing excellent service.

Some meat brokers and food retailers in the U.S. desiring to do business with Canadian firms reported difficulty in keeping a record of Canadian pork markets, product availability, suppliers, Canadian brokers, trade regulations, etc. Furthermore, some Canadian firms were said to be negligent in answering correspondence or cooperating with firms making trade enquiries through federal trade offices.

Basically, all of the above problems in obtaining adequate distribution in U.S. markets, are the result of the relatively small volumes marketed, the uncertainties of supply associated with cyclical production patterns, and uncertainties of timely delivery associated with inadequate transportation service and border crossing procedures. Each of these topics was discussed above. A related problem may be one aspect of competition among exporters for outlets in a market area. Many retailers are willing to carry only one Canadian line. If the volume moving into an area is not large in total, the division of it among several firms makes the share of each small and its distribution costs high compared to the costs of competing U.S. firms.

Two institutional factors which could have some adverse effect on the ability of Canadian firms to compete in U.S. markets are: (1) Imported products are ineligible to participate in the U.S. food stamp program. This could discourage some retailers from carrying such products because of the extra problems at checkout counters. (2) The advent of dual or unit pricing will emphasize the relatively high cost per pound of Canadian products such as sliced bacon.

CHAPTER 8

THE UNITED STATES MARKET FOR CANADIAN SLAUGHTER HOGS

This chapter examines the expanding trade in live hog exports to the United States. Many of the factors which influence this trade are the same as, or directly related to, the factors which govern the level of pork exports.

Recent Trends

There has been a small number of live animals exported to the United States for slaughter for several years. In the 1966-69 period these exports averaged 16,435 head per year. Virtually all live animals exported for slaughter were boars and sows.

Boars can be profitably exported to the U.S. because, unlike the situation in Canada, the U.S. does permit their slaughter for consumption purposes.

The export of sows is based on a price advantage in the U.S. market. As a general rule the price of sows in the U.S. is closer to the price level for barrows and gilts than is the case in Canada. There are several reasons: the higher average weight for barrows and gilts in the U.S. and the resulting price pattern for cuts; the higher average weight of sows in Canada; and the demand for a large variety of sausage products in the U.S.

In 1970 the total number of live hogs exported for slaughter increased to 71,465 head. In 1971 the total exported to July 31 was 46,718, compared to 39,389 for the same period in the previous year. The export of straight hogs (barrows and gilts - often referred to as market hogs), mainly from Alberta accounted for a substantial part of the increase.

The rapid increase in the export of straight hogs from Alberta was due to two main factors. One reason was that the federal government ceased paying a hog quality premium on carcasses. With the total producer return determined by the market price, U.S. buyers were placed on a more equal footing with Canadian buyers. The second reason was that the large increase in Canadian hog production in 1970 over 1969 had dropped prices in Canada relative to the U.S.

Importance of Live Hog Exports

The export of straight hogs from Alberta is important to the hog producer in that it provides an alternative market for his hogs and quickly and effectively establishes a "floor price" for them.

The argument may be presented that, in the interests of the total Canadian economy, all of our hogs should be slaughtered in Canada and the subsequent products exported to the U.S. The degree to which live hog exports might substitute for pork exports was not examined in this study.

Market Potential

The market potential for live hog exports like the potential for pork exports, depends on price and quality factors and various aspects of the marketing system. These items are discussed briefly; many points made in previous sections are relevant to the live hog trade.

Price

The differential between hog and pork prices in Canada and the United States is the major factor governing live hog exports. Previous discussion of

factors influencing this differential overtime will not be repeated here.

Regional price differentials, however, are especially important to live hog exports. Restrictions on shipping live hogs (for example, they must be unloaded and rested after 36 hours), transportation charges, and shrinkage are three reasons why hogs cannot profitably be shipped long distances.

The price situation for selected provinces is about as follows:

Ontario: It is not likely that the price of hogs in Ontario will become attractive to U.S. slaughterers in Detroit, Buffalo, or Rochester. Plants in these areas are close to some of the hog producing states in the Corn Belt.

Manitoba: Although Manitoba is not the area of lowest hog prices in Canada it is adjacent to the region of lowest hog prices in the U.S. Despite this apparent disadvantage, market hogs recently have been shipped from Manitoba into the Minneapolis - St. Paul area. These shipments obviously indicate some live hog export potential for Manitoba.

Alberta: As discussed earlier, the Pacific Northwest of the U.S. (the states of Washington and Oregon) is a "high hog price area" in the U.S. and Alberta is the "low hog price area" in Canada. Local hog production in the Pacific region is very limited and the slaughtering plants bring in about 80 percent of their requirements from the U.S. Midwest. The main Alberta centers - Edmonton, Calgary, and Lethbridge are all closer to packing plants in the Pacific Northwest than are the main areas of hog production in the Midwest (e.g., Iowa) and mileage is an important basis of trucking charges.

Alberta, therefore, is in the most favourable location of any Canadian province to develop a sizeable export of live hogs. The plants in the Pacific Northwest are definitely interested, but it is strictly a "question of price". The "laid-in" cost of Alberta hogs has to be comparable with that of Midwest hogs after allowing for the difference in dressing percentage. Alberta hogs also provide, as an alternate source, some measure of "leverage" to these plants in negotiating the price of hogs out of the Midwest.

Quality

Canadian hogs have the advantage of producing, on the average, a higher yield of trimmed cuts than U.S. hogs. In addition, due to the long background of official grading and a pricing system with specific differentials between grades, the Canadian hog is fairly well "standardized", particularly in terms of type, amount and uniformity of backfat, range of live weights, and color. The major disadvantage of Canadian hogs from the point of view of U.S. processors is their relatively light weight; bellies have a tendency to be thin, the loin eye area is smaller than in U.S. hogs, and the percentage of the primal cuts that are hams and loins is lower.

Stability of Supply

No U.S. meat packer can effectively utilize and merchandize pork from Canadian hogs to the best advantage on an intermittent basis. At the same time, the Canadian hog producer who might breed and feed hogs to heavier weights risks a price discount in the local market if cyclical price swings should exclude him from the U.S. market.

Hog Selling System

In Alberta, Manitoba and Ontario, live market hogs are sold on a carcass grade basis using a Dutch auction teletype system. Each province has been attempting to accommodate its system to the sale of live hogs for export. The two major difficulties are: (1) the assessment of live hog values in terms of carcass index values and the preference of U.S. buyers for hogs in the heavier weight ranges, and (2) the related problem of allowing the U.S. buyer a suitable method of negotiating the price of a carefully selected lot of hogs while still adhering to the principle of offering all hogs to all buyers.^{1/}

U.S. Border Inspection and Customs Procedures

Live hogs entering the United States must be examined for sickness and disease. The U.S.D.A. officer in charge at the port of entry requires that trucks be unloaded for inspection. In addition, in most cases, U.S. customs officials will not accept the invoice weight for duty purposes, and hogs have to be weighed at the time of inspection. A related problem is that the facilities are not adequate at all border inspection points for the efficient handling of double deck trailers.

The amount of handling and the time involved in crossing the border increases the incidence of bruising and leads to greater shrinkage than would occur on a domestic shipment of equal distance. The result is a lower yield, and the U.S. buyer has to make allowance for this in the price bid. The

^{1/} The Alberta Hog Producers Marketing Board recently introduced the sale of hogs on a liveweight basis at Lethbridge, Calgary and Edmonton.

losses are greatest in periods of hot weather and in extreme cases include death losses.

Transportation

There is a place for more Canadian carriers, licensed by the U.S. Interstate Commerce Commission, to transport hogs to U.S. plants.

CHAPTER 9

CONCLUSIONS AND RECOMMENDATIONS*

1. It would appear that stability and a planned expansion of quality hog supplies at competitive prices is an essential factor to providing a reasonable increase in sales to the U.S. Furthermore, U.S. retailers would appear to have placed Canadian specialty processed pork items into certain retail price categories.^{1/} It is logical then to believe that processors could commit themselves to longer term contractual arrangements with selected hog producers to provide a high quality pork product for this type of demand. We would like also to suggest that Hog Producers' Marketing Boards, in cooperation with individual meat packers, review their selling procedures in order to facilitate this type of arrangement. Perhaps some type of a future trading arrangement might be considered.

2. U.S.D.A. meat inspection service should be made available to eastern and western packing plants. Of course, details would have to be worked out but federal funds might well be put to good use in initiating this service and working with U.S.D.A. to avoid the additional cost to Canadian meat packers. The benefits of U.S.D.A. inspection at the point where initial pork or hog shipments are loaded for transportation to the U.S. are obvious.

Inspection at the border (unloading or sampling), should not be necessary. Customs procedures at the border should be simplified with necessary paper work being performed and approved at the initial shipping point. Custom Brokerage charges and procedures appear to need reappraisal. Procedures should be adapted in order to allow bonded loads of meat products to go directly to federally inspected premises in the U.S., with a minimum delay or expense at the border.

While the amount of meat products being rejected by U.S.D.A. officials may appear to be small as a percentage of total shipments, the uncertainty generated by the situation does appear to have a dampening effect on exports of meat to the U.S. Therefore, action should be taken to minimize the problem.

3. There is a need for regional locations to be made available to handle problems and opportunities in U.S.-Canada meat trade. It is imperative that, when problems or opportunities arise, exporters or importers are able to receive immediate information or help from people who have the authority to act. This role is presently looked after by senior civil service administrators who largely concern themselves with domestic affairs. The problems of exporters and importers are more involved and in some cases more urgent than those inherent in domestic matters. If the multi-agency, centralized service proves to be politically unacceptable, specific people in each government agency should be delegated to look after these matters, with authority to act.

* This chapter is reproduced directly from the working document.

^{1/} A practice which business analysts refer to as "price lining".

4. A major problem in U.S.-Canada trade in pork is the availability of refrigerated transportation equipment to deliver meat to U.S. customers. LTL or partial loads are a particular problem. Consideration is then suggested for the development of trucking corridors, similar to those developed for airline traffic, to service major U.S. and Canadian distribution points.

5. The Canada Department of Industry, Trade and Commerce should consider:

- (a) preparing a simplified handbook outlining U.S. and Canadian trade and health rules and regulations for exporters and importers;
- (b) preparing a digested weekly or periodic summary of pork supplies, sales, brokers enquiries, names for use by importers of Canadian products, etc. Current U.S. meat industry sources for Canadian information and market intelligence appear inadequate and incomplete;
- (c) organizing workshops, in cooperation with the Meat Packers Council, exploring the U.S.-Canada meat market and its relevant problems, i.e., meat inspection, plant inspection, label clearance, market potential, etc. Potential government aid and promotion could also be examined. Furthermore, U.S. officials, expert in the above matters, should be invited to participate at the same time in order that problems and ideas can be clarified on the three-level basis. Arrangements could also be made at the workshops or at the annual MPC meetings for confidential interviews with U.S. and Canadian officials. The necessity to include U.S. officials in planning for Canadian sales to the U.S. is seen as a major step in educating Canadian exporters and avoiding difficulties in exporting to the U.S.;
- (d) developing expertise and singular knowledge of meat products among their staffs living in countries which are our major suppliers, buyers, or competitors, e.g., Australia, New Zealand, Denmark, United States, and Japan. The concept of generalization may be valid in terms of flexibility, but it loses much in the world of credibility and relevance;
- (e) consider the substitution of exhibits at U.S. meat industry trade shows for its current program in promoting "food fairs".
- (f) consider the direct support of packer brand promotions in specific U.S. markets. It is probable that this would be as effective as "Buy Canada" promotions and provided this aid is available to all exporting packers, it should be politically acceptable.

- (g) consider providing exporting Canadian packers with financial aid on LTL shipments until full load volume is available or alternately provide such aid on an introductory basis.

6. The study team is concerned about why Canada has virtually withdrawn from the U.S. canned ham market, particularly in view of the fact that the volume of U.S. imports of canned ham and shoulders has steadily increased. In the first half of 1971, although the U.S. had a record hog slaughter, U.S. imports of canned hams and shoulders totaled 186 million pounds compared with 179 million pounds in the year-earlier period. The U.S. trade does not expect any change in this trend in the foreseeable future. Thus the industry should consider two pertinent questions.

Should the Canadian hog industry continue to export heavy hams in fresh form (i.e., not processed), to the U.S. "ham boning" plants in the greater New York area, where such hams are converted into a premium quality cooked ham? or

Should the industry be exporting such hams in the form of high quality canned hams and compete with European canned hams?

Obviously it is simpler and more profitable at present to continue shipping fresh hams; a "premium market" is well established, but it is possible that over the long run both the hog industry "per se" and the "Canadian economy" might gain from the diversification into the export of heavy hams in processed form, especially as canned or specialty hams.

7. The amazing growth and the impact of off-shore imports particularly canned hams and shoulders from Europe (Denmark, Netherlands, Poland, and Yugoslavia, etc.) should be further examined. What are the factors that:

- (a) make it possible for exports of European canned hams, particularly the type used primarily for slicing, to dominate the U.S. market? It is not due to price alone, as this imported product sells at a premium over domestic U.S. canned hams;
- (b) account for the large volume of canned luncheon meat coming into Canada from Europe despite a 25 percent ad valorem duty.

In the case of imported canned hams in the U.S., is the present situation due to: (a) basic quality (based on type of hog, breeding, feeding, etc.)? (b) superior processing (trimming, type of cure, colour, minimum shrinkage, age and minimum breakage in the slicing operation)? (c) methods of merchandizing and promotion in the North American market? (d) lower costs? or (e) subsidization in some form by the Government of the respective exporting country?

8. Canadian meat packers might well examine the possibility of having their bacon or ham products custom sliced and packaged in the U.S. in order to be more competitive.

9. (a) Current grade standards for hogs, which are administered by C.D.A., would appear to discriminate rather heavily against hogs weighing 230 lbs. or heavier, liveweight. The current situation thus would seem to discourage hog producers from producing hogs or pork cuts acceptable in U.S. markets. Therefore it is recommended that the grade standards be reviewed with export values included in the projected value of pork cuts.

(b) Furthermore it is recommended that hog carcasses be identified by index ranking after they have been graded. This would lead to easier selection of high quality carcasses for export.

(c) The Canada Department of Agriculture should carefully examine the development of the U.S. meat type hog and institute increased genetic reconciliation with Canadian foundation swine herds. Hog Producers Marketing Boards and the Canadian Pork Council might also consider if they have a role to play in this matter.

10. Research should be undertaken in regard to the competitive position of the Canadian hog producer versus his U.S. Midwest counterpart on the "North American Economy". The vital question is - can he make a profit (i.e., a living) selling hogs in the combined U.S.-Canadian domestic market at a price level established in the U.S. Midwest? In contrast to the U.S., where hogs are concentrated in the Midwest, hog production in Canada makes an important contribution, in terms of Farm Cash Receipts, in most regions (B.C. and Newfoundland are the exceptions).

Therefore, this study should be in three parts:

- i) The Prairie provinces where off-board barley is the main feed grain.
- ii) Western Ontario (specifically the area in Eastern Canada where hogs are mainly fed on locally produced corn).
- iii) Quebec and the Atlantic Provinces (specifically those areas in the east, that finish hogs mainly on western barley and/or U.S. corn).

11. Studies should be undertaken (and/or continued) to maintain or improve Canada's present favourable position with respect to the rate of incidence of disease. In particular, attention should be focused on Transmissible Gastroenteritis, which has been very serious in the U.S. Midwest, and other diseases that take a heavy toll of young pigs.

12. Per capita consumption of pork... Canada and U.S. should be studied to determine why per capita consumption of pork is so much lower in Canada ... approximately 10 pounds. Should all of the higher per capita consumption in the U.S. be attributed to the lower standard of living in Canada? Does the difference indicate that the U.S. industry (particularly

the processor and the retailer) has done a superior job in merchandizing and promoting pork? Is the difference due, in some degree, to the long time activities of the National Livestock and Meat Board (jointly financed by the producers and the processors) and to the recently formed National Pork Producers Council? If so, should we have such organizations in Canada?

13. Economic research into pork production and marketing must be developed along a coordinated commodity systems approach. There is a need to institute national research planning workshops in order to develop regionally coordinated research efforts by federal, provincial, and university researchers and funding agencies. Possible research areas might include demand analysis, the impact of advertising and promotional techniques on domestic and export consumption, the role of provincial marketing boards in exports, the role of governments in promoting trade, the impact of Wheat Board policies on hog production and exports, livestock and meat movements in Canada and market structure, conduct and performance within the pork industry. In addition, the economics of confined rearing, transportation, grade standards, market information, etc., might also be evaluated. This list is certainly incomplete and is merely illustrative of the diversity of research and the need to coordinate and systemize the research effort in pork products for Canada.

14. The study team has spent considerable time in developing and preparing this report. During the research period considerable information and knowledge has been developed in regard to the pork industry in North America. It seems a logical extension of this research that details of the pork market potential of Japan, Hong Kong, Korea, and China be examined in similar manner. Similarly the possibilities of expanding trade in the Caribbean might also be examined.

15. The Federal Government and the Canadian Wheat Board would be well advised to consider on a continuing basis the implications of maximized off-shore barley sales on hog production within Canada. A policy of relatively low priced stable feed grain supplies within Canada would appear to be a solid base for improving total farm income and in generating employment, economic growth, and income stability within the rural sector of the economy and perhaps more importantly increasing the total welfare of all Canadians. Furthermore, a valid point for investigation concerns the possibility that U.S. farm policy on feed grains gives the U.S. hog producer a competitive advantage over his Canadian counterpart.

16. Finally, the Canada Department of Agriculture should consider the desirability of establishing an All Industry Board to annually review the hog industry. Such a Board composed of producers, processors, and resource personnel could perform vital and useful functions:

- (a) Be a focal point for data resulting from U.S.-Canada research, studies and surveys that make up part of "Production, Marketing and Merchandising Intelligence."
- (b) Ensure that there would be an annual review of the total industry.

- (c) Add prestige to the industry by the recognition that would accrue to an All Industry Board.
- (d) Give the pork producer some badly needed status. The hog industry has been overshadowed by the "glamour and romance" of the beef business.

TABLE 1 - EXPORTS OF DRESSED PORK TO THE UNITED STATES AND OTHER COUNTRIES,
1950 TO 1970

Annual and Five Year Average	To United States		To Other Countries		To All Countries	
	000 lbs.	000\$	000 lbs.	000\$	000 lbs.	000\$
1950	6,508	3,829	78,236	25,807	84,744	29,636
1951	18,758	11,649	10,556	2,877	29,314	14,526
1952	17,096	12,556	9,322	2,227	26,418	14,783
1953	58,282	34,196	11,291	2,130	69,573	36,326
1954	61,021	35,068	8,930	2,234	69,951	37,302
<u>1950-54</u> (Percent of Total)	32,333	19,460	23,667	7,055	56,000	26,515
	(57.7)	(73.4)	(42.3)	(26.6)	(100.0)	(100.0)
1955	63,075	32,381	10,200	2,374	73,275	34,755
1956	51,009	27,597	10,948	2,452	61,957	30,049
1957	31,820	19,024	8,483	1,911	40,303	20,935
1958	57,379	27,944	8,600	2,014	65,979	29,958
1959	53,222	23,952	19,223	3,934	72,445	27,886
<u>1955-59</u> (Percent of Total)	51,301	26,180	11,491	2,537	62,792	28,717
	(81.7)	(91.2)	(18.3)	(8.8)	(100.0)	(100.0)
1960	45,098	21,131	24,592	4,181	69,690	25,312
1961	42,428	20,504	15,812	4,333	58,240	24,837
1962	44,318	21,229	15,351	4,382	59,669	25,611
1963	44,452	21,868	19,667	5,146	64,119	27,014
1964	48,353	23,359	6,448	3,091	54,801	26,450
<u>1960-64</u> (Percent of Total)	44,930	21,618	16,374	4,227	61,304	25,845
	(73.3)	(83.6)	(26.7)	(16.4)	(100.0)	(100.0)
1965	53,309	28,757	3,627	2,121	56,936	30,878
1966	44,264	25,445	3,053	2,097	47,317	27,542
1967	53,169	26,422	4,751	2,425	57,920	28,847
1968	54,237	27,010	4,883	2,481	59,120	29,491
1969	48,453	29,013	6,453	4,539	54,906	33,552
<u>1965-69</u> (Percent of Total)	50,687	27,329	4,553	2,733	55,240	30,062
	(91.8)	(90.9)	(8.2)	(9.1)	(100.0)	(100.0)
1970	58,693	30,910	10,269	6,023	68,962	36,933

Source: Canada, D.B.S., Trade of Canada (Ottawa)

TABLE 2 - EXPORTS OF DRESSED PORK TO THE UNITED STATES, 1950 TO 1970

Annual and Five Year Average	Fresh or Frozen	Processed	Canned	Total
- 000 pounds -				
1950	1,152	5,356	-	6,508
1951	8,675	3,502	6,581	18,758
1952	2,507	2,585	12,004	17,096
1953	35,245	6,098	16,939	58,282
1954	40,184	9,569	11,268	61,021
<u>1950-54</u> (Percent of Total)	17,553 (54.3)	5,422 (16.8)	9,358 (28.9)	32,333 (100.0)
1955	39,481	11,978	11,616	63,075
1956	31,491	10,555	8,963	51,009
1957	22,165	5,776	3,879	31,820
1958	46,589	6,483	4,307	57,379
1959	42,467	6,372	4,383	53,222
<u>1955-59</u> (Percent of Total)	36,439 (71.0)	8,233 (16.1)	6,629 (12.9)	51,301 (100.0)
1960	35,882	6,031	3,185	45,098
1961	34,080	5,680	2,668	42,428
1962	35,451	6,117	2,750	44,318
1963	33,950	7,465	3,037	44,452
1964	37,085	8,188	3,080	48,353
<u>1960-64</u> (Percent of Total)	35,290 (78.5)	6,696 (14.9)	2,944 (6.6)	44,930 (100.0)
1965	42,194	8,754	2,361	53,309
1966	37,184	5,721	1,359	44,264
1967	46,482	5,423	1,264	53,169
1968	47,878	5,540	819	54,237
1969	43,069	4,623	761	48,453
<u>1965-69</u> (Percent of Total)	43,361 (85.5)	6,012 (11.9)	1,313 (2.6)	50,686 (100.0)
1970	53,149	4,558	986	58,693

Source: Ibid.

TABLE 3 - EXPORTS OF PORK, BY CLASS AND CUT, TO ALL COUNTRIES, 1969 AND 1970

	1969		1970	
	000 lbs.	Percent of Total	000 lbs.	Percent of Total
<u>Fresh or Frozen</u>				
Hams	38,618.2	79.7	39,937.0	68.0
Bellies	2,265.8	4.7	6,448.5	11.0
Spareribs	-	-	199.5	0.4
Pork N.E.S. ¹	2,185.4	4.5	6,564.5	11.2
Sub-total	43,069.4	88.9	53,149.5	90.6
<u>Processed</u>				
Hams cured and/or smoked	683.3	1.4	685.5	1.2
Bacon and sides	3,075.1	6.4	3,353.0	5.7
Boiled ham cooked	604.4	1.2	259.9	0.4
Pork cured N.E.S. ²	261.0	0.5	259.0	0.4
Sub-total	4,623.8	9.5	4,557.4	7.7
<u>Canned</u>				
Hams	747.6	1.6	873.5	1.5
Pork canned N.E.S.	12.9	.0	112.9	0.2
Sub-total	760.5	1.6	986.4	1.7
Grand Total	48,453.7	100.0	58,693.3	100.0
Equivalent in Carcasses ³	538,374		652,148	

Source: Ibid.

¹ Includes all Fresh or Fresh Frozen Product other than hams, bellies and spareribs.

² Includes all processed (excluding canned) items other than hams and ham products, sides (bellies), and sliced bacon.

³ For this calculation an arbitrary average of 90 pounds per carcass is assumed.

TABLE 4 - EXPORTS OF PROCESSED PORK TO THE UNITED STATES, 1950 TO 1970

Year	Cured Hams	Bacon and Sides	Boiled Hams Cooked	Other Pork Cured	Total
- 000 pounds -					
1950	-	5,282	n.a.	74	5,356
1951	-	3,500	n.a.	2	3,502
1952	-	2,560	n.a.	25	2,585
1953	-	6,097	n.a.	1	6,098
1954	-	7,013	2,553	3	9,569
1955	-	8,554	3,424	-	11,978
1956	-	6,444	4,111	-	10,555
1957	-	3,506	2,269	1	5,776
1958	-	4,569	1,914	0	6,483
1959	1,273	3,242	1,857	-	6,372
1960	1,294	3,299	1,438	-	6,031
1961	922	3,340	1,098	320	5,680
1962	1,323	3,555	876	363	6,117
1963	2,342	3,994	880	249	7,465
1964	1,576	4,259	2,140	213	8,188
1965	1,574	4,924	1,998	258	8,754
1966	959	3,513	1,096	153	5,721
1967	884	3,499	842	198	5,423
1968	1,100	3,314	866	260	5,540
1969	683	3,075	604	261	4,623
1970	686	3,353	260	259	4,558

Source: Ibid.

TABLE 5 - TOTAL EXPORTS OF PORK TO COUNTRIES OTHER THAN THE UNITED STATES,
1950 TO 1970

Year	Pork Fresh or Frozen	Pork Cured ¹	Processed and Canned					Pork Canned	Total
			Bacon and Sides Cured	Boiled	Hams Cooked	Hams Cured	Hams Canned		
- 000 pounds -									
1950	849	4,142	73,245	-	-	-	-	-	78,236
1951	454	6,579	2,632	-	-	891	-	-	10,556
1952	379	7,146	979	-	-	818	-	-	9,322
1953	4,521	5,635	930	-	-	205	-	-	11,291
1954	791	6,998	1,065	9	-	67	-	-	8,930
1955	685	8,127	1,311	21	-	56	-	-	10,200
1956	459	8,734	1,571	51	-	133	-	-	10,948
1957	199	7,085	1,178	10	-	11	-	-	8,483
1958	193	7,335	1,060	4	-	8	-	-	8,600
1959	9,885	8,114	393	3	814	14	-	-	19,223
1960	15,245	7,225	547	4	816	755	-	-	24,592
1961	949	8,341	559	22	922	1,792	3,227	-	15,812
1962	830	1,703	579	31	743	479	10,986	-	15,351
1963	622	1,399	604	45	527	706	15,764	-	19,667
1964	2,745	676	766	24	832	974	431	-	6,448
1965	894	348	739	16	1,053	522	55	-	3,627
1966	721	240	630	21	823	473	145	-	3,053
1967	2,739	346	246	6	1,112	297	5	-	4,751
1968	3,202	571	218	4	216	612	60	-	4,883
1969	5,121	325	224	54	229	382	118	-	6,453
1970	9,274	352	196	16	289	47	95	-	10,269

¹ Primarily pork pickled and barrelled.

Source: Ibid.

TABLE 6 - TOTAL PORK EXPORTS TO UNITED STATES REGIONS, BY REGION OF LADING
IN CANADA, 1970

U.S. Region	Region of Lading				Canada	
	East		West		000 lbs.	Percent of Total
	000 lbs.	Percent of Total	000 lbs.	Percent of Total	000 lbs.	Percent of Total
New England	47.8	0.2	33.1	0.1	80.9	0.1
Middle Atlantic	18,271.3	88.3	25,414.1	66.9	43,685.4	74.4
South Atlantic	163.0	0.8	115.4	0.3	278.4	0.5
East South Central	-	-	15.0	0	15.0	0
East North Central	1,942.4	9.4	541.3	1.4	2,483.7	4.2
West North Central	148.5	0.7	2,838.1	7.5	2,986.6	5.1
West South Central	129.2	0.6	-	-	129.2	0.2
Mountain	-	-	206.6	0.6	206.6	0.4
Pacific	3.5	0	8,824.0	23.2	8,827.5	15.1
Total to U.S.	20,705.7	100.0	37,987.6	100.0	58,693.3	100.0
Percent of Total from East and West	35.3		64.7		100.0	

Source: Ibid.

TABLE 7 - FRESH AND FROZEN PORK EXPORTS TO UNITED STATES REGIONS, BY REGION OF LADING IN CANADA, 1970

U.S. Region	Region of Lading				Canada	
	East		West		000	Percent
	lbs.	Percent of Total	lbs.	Percent of Total	lbs.	of Total
New England	44.7	0.3	33.0	0.1	77.7	0.1
Middle Atlantic	15,797.1	95.0	25,326.0	69.3	41,123.1	77.4
South Atlantic	162.6	1.0	115.4	0.3	278.0	0.5
East South Central	-	-	15.0	0	15.0	0
East North Central	562.1	3.4	539.9	1.5	1,102.0	2.1
West North Central	58.7	0.3	2,518.0	6.9	2,576.7	4.9
West South Central	-	-	-	-	-	-
Mountain	-	-	206.6	0.6	206.6	0.4
Pacific	2.6	0	7,767.8	21.3	7,770.4	14.6
Total to U.S.	16,627.8	100.0	36,521.7	100.0	53,149.5	100.0
Percent of Fresh or Frozen	31.3		68.7		100.0	

Source: Ibid.

TABLE 8 - PROCESSED PORK EXPORTS TO UNITED STATES REGIONS, BY REGION OF LADING
IN CANADA, 1970

U.S. Regions	Regions of Lading				Canada	
	East		West		000 lbs.	Percent of Total
	000 lbs.	Percent of Total	000 lbs.	Percent of Total		
New England	2.5	0.1	0.1	0	2.6	0.1
Middle Atlantic	2,127.2	62.8	0.1	0	2,127.3	46.7
South Atlantic	0.4	0	-	-	0.4	0
East South Central	-	-	-	-	-	-
East North Central	1,035.6	30.6	1.4	0.1	1,037.0	22.8
West North Central	89.8	2.7	153.5	13.1	243.3	5.3
West South Central	129.2	3.8	-	-	129.2	2.8
Mountain	-	-	-	-	-	-
Pacific	0.9	0	1,016.7	86.8	1,017.6	22.3
Total to U.S.	3,385.6	100.0	1,171.8	100.0	4,557.5	100.0
Percent of Processed	74.3		25.7		100.0	

Source: Ibid.

TABLE 9 - CANNED PORK EXPORTS TO UNITED STATES REGIONS, BY REGION OF LADING
IN CANADA, 1970

U.S. Region	Regions of Lading					
	East		West		Canada	
	000 lbs.	Percent of Total	000 lbs.	Percent of Total	000 lbs.	Percent of Total
New England	0.6	0.1	-	-	0.6	0.1
Middle Atlantic	347.0	50.1	88.0	29.9	435.0	44.1
East North Central	344.7	49.8	-	-	344.7	34.9
West North Central	-	-	166.6	56.7	166.6	16.9
Pacific	-	-	39.5	13.4	39.5	4.0
Total to U.S.	692.3	100.0	294.1	100.0	986.4	100.0
Percent of Canned	70.2		29.8		100.0	

Source: Ibid.

TABLE 10 - IMPORTS OF DRESSED PORK FROM THE UNITED STATES AND OTHER COUNTRIES,
1950 TO 1970

Annual and Five-Year Average	From U.S.A.		Other Countries		Total All Countries	
	000 lbs.	000\$	000 lbs.	000\$	000 lbs.	000\$
1950	6,004	905	1	-	6,005	905
1951	22,620	6,702	10	4	22,630	6,706
1952	4,813	903	11	4	4,824	907
1953	56	20	381	184	437	204
1954	59	32	1,423	638	1,482	670
<u>1950-54</u>	6,711	1,712	365	166	7,076	1,878
1955	29	24	88	32	117	56
1956	37	29	74	31	111	60
1957	1,203	623	143	56	1,346	679
1958	1,244	677	289	106	1,533	783
1959	1,145	468	67	30	1,212	498
<u>1955-59</u>	732	364	132	51	864	415
1960	17,013	4,800	48	26	17,061	4,826
1961	40,630	13,194	23	13	40,653	13,207
1962	36,399	11,170	65	28	36,464	11,198
1963	86,551	25,321	1,936	751	88,487	26,072
1964	52,551	15,070	63	29	52,614	15,099
<u>1960-64</u>	46,629	13,911	427	169	47,056	14,080
1965	27,504	9,687	9,101	3,862	36,605	13,549
1966	27,296	11,498	9,197	4,281	36,493	15,779
1967	26,836	9,987	1,004	405	27,840	10,392
1968	36,428	13,830	8,646	2,932	45,074	16,762
1969	66,901	28,553	8,772	3,167	75,673	31,720
<u>1965-69</u>	36,993	14,711	7,344	2,929	44,337	17,640
1970	22,935	9,253	7,896	2,956	30,831	12,209

Source: Ibid.

TABLE 11 - IMPORTS OF DRESSED PORK FROM THE UNITED STATES, 1950 TO 1970

Year	Fresh or Frozen	Processed	Total
- 000 pounds -			
1950	1,666	4,338	6,004
1951	15,881	6,739	22,620
1952	1,843	2,970	4,813
1953	-	56	56
1954	-	59	59
1955	-	29	29
1956	-	37	37
1957	-	1,203	1,203
1958	3	1,241	1,244
1959	1	1,144	1,145
1960	11,429	5,584	17,013
1961	28,655	11,975	40,630
1962	23,570	12,829	36,399
1963	74,963	11,588	86,551
1964	42,140	10,411	52,551
1965	18,424	9,080	27,504
1966	18,291	9,005	27,296
1967	17,357	9,479	26,836
1968	26,609	9,819	36,428
1969	55,697	11,204	66,901
1970	14,969	7,966	22,935

Source: Ibid.

TABLE 12 - IMPORTS OF PORK FROM THE U.S.A., BY CLASS AND CUT, 1969 AND 1970

	1969 000 lbs. ⁵	Percent of Total	1970 000 lbs.	Percent of Total
<u>Fresh or Frozen</u>				
Hams	17,446.9	26.1	5,418.8	23.6
Bellies	10,992.5	16.4	3,968.5	17.3
Shoulders, Picnics, Butts	5,737.4	8.6	1,517.6	6.6
Spare ribs	3,485.0	5.2	1,318.5	5.8
Pork N.E.S. ¹	18,036.1	27.0	2,745.8	12.0
Sub-total	55,697.9	83.3	14,969.2	65.3
<u>Processed</u>				
Backs ²	4,372.0	6.5	4,373.3	19.1
Bacon and Sides	2,715.2	4.0	1,431.0	6.2
Shoulders, Picnics, Butts	2,051.5	3.1	1,012.0	4.4
Pork N.E.S. ³	2,048.7	3.1	1,143.4	5.0
Sub-total	11,187.4	16.7	7,959.7	34.7
<u>Canned</u>				
Hams	16.4	-	6.6	-
GRAND TOTAL	66,901.7	100.0	22,935.5	100.0
Equivalent in carcasses ⁴	743,352		254,839	

¹ Includes all Fresh or Frozen Product other than hams, bellies, shoulders, picnics, butts and spare ribs. Carcasses and side fall into this category.

² Virtually all "Back Fat".

³ Includes all processed (excluding canned) items other than backs; bacon and sides; shoulders, picnics and butts. Barreled pork (in brine) falls into this category.

⁴ For this calculation an arbitrary average of 90 pounds per carcass is used.

⁵ Product weight.

Source: Ibid.

TABLE 13 - IMPORTS OF PORK, BY COUNTRIES OTHER THAN THE UNITED STATES, 1966 TO 1970

	Pork Fresh or Frozen			Total Fresh or Frozen			Processed and Canned			Total Fresh-Frozen		
	Shoulders			Luncheon			Processed and Canned			Frozen-Processed		
	Spare Ribs	Hams	Other	Fresh or Frozen	Hams	Canned	Meat	Canned	Other ¹	Canned	Canned	
- 000 pounds -												
1966	2,624	529	1,676	1,935	2,342	9,106	-	-	91	91	9,197 ²	
1967	347	112	-	104	91	654	-	-	350	350	1,004 ³	
1968												
United Kingdom	537	210	5	3	194	949	-	-	-	-	949	
Ireland	184	-	-	-	23	207	-	-	-	-	207	
Denmark	-	-	-	-	-	-	111	6,672	-	-	6,783	
Poland	-	-	-	-	-	-	590	-	-	-	590	
Netherlands	-	-	-	-	-	-	-	107	-	-	107	
Total	721	210	5	3	217	1,156	(711) ⁴	6,779	-	7,490	8,646	
1969												
United Kingdom	679	263	65	75	482	1,564	-	-	-	-	1,564	
Ireland	315	120	100	85	158	778	-	-	3	3	781	
Denmark	-	-	-	-	-	-	75	5,559	-	-	5,634	
Hungary	-	-	-	-	-	-	33	-	-	-	33	
Poland	-	-	-	-	-	-	392	368	-	-	760	
Total	994	356	165	160	640	2,342	500	5,927	3	6,430	8,772	
1970												
United Kingdom	1,182	461	61	31	171	1,906	-	-	-	-	1,906	
Ireland	80	16	-	-	130	226	-	-	389	389	615	
Denmark	-	-	-	-	-	-	90	4,748	-	-	4,838	
Hungary	-	-	-	-	-	-	30	-	-	-	30	
Poland	-	-	-	-	-	-	211	-	-	-	211	
Netherlands	-	-	-	-	-	-	-	295	-	-	295	
Total	1,262	477	61	31	301	2,132	331	(5,044) ⁵	389	5,764	7,896	

¹ Includes bacon sides, shoulders, picnics and butts cured.² 8,564 thousand lbs. from U.K. and 633 thousand lbs. from Ireland.³ 966 thousand lbs. from U.K. and 38 thousand from Ireland.⁴ Includes 10 thousand lbs. of canned ham from Hungary.⁵ Includes 1 thousand lbs. from Italy.Source: Ibid.

TABLE 14 - IMPORTS OF PORK FROM THE UNITED STATES, BY PROVINCE OF CLEARANCE, 1970

	Atlantic Provinces	Ontario Quebec	EAST	Prairie Provinces	British Columbia	WEST	CANADA	Percent Grand Total
	- 000 pounds -							
<u>Fresh or Frozen</u>								
Hams	422.2	12,623.3	13,045.5	3,117.8	1,283.6	4,401.4	17,446.9	26.1
Bellies	1,182.2	6,371.9	7,554.1	1,526.9	1,911.5	3,438.4	10,992.5	16.4
Shoulders, Picnics, Butts	512.9	2,392.8	2,904.8	367.1	2,465.5	2,832.6	5,737.4	8.6
Spare ribs	31.1	2,859.1	2,890.2	74.7	520.1	594.8	3,485.0	5.2
Pork N.E.S.	704.4	15,448.0	16,152.4	1,432.9	450.8	1,883.7	18,036.1	26.9
Total	2,851.9	39,695.1	42,547.0	6,519.4	6,631.5	13,150.9	55,697.6	-
Percent Canada	(5.1)	(71.3)	(76.4)	(11.7)	(11.9)	(23.6)	(100.0)	(83.2)
<u>Processed</u>								
Backs	2,429.3	1,942.7	4,372.0	-	-	-	4,372.0	6.5
Bacon sides	-	2,715.2	2,715.2	-	-	-	2,715.2	4.1
Shoulders, Picnics, Butts	1.5	2,050.0	2,051.5	-	-	-	2,051.5	3.1
Pork N.E.S.	1,000.3	1,048.4	2,048.7	-	-	-	2,048.7	3.1
Total	3,431.1	7,756.3	11,187.4	-	-	-	11,187.4	-
Percent Canada	(30.7)	(69.3)	(100.0)	(-)	(-)	(-)	(100.0)	(16.8)
Canned Hams	-	6.1	6.1	10.3	-	-	10.3	16.4
<u>TOTAL OF ALL</u>	6,283.0	47,457.5	53,740.5	6,529.7	6,631.5	13,161.2	66,901.7	-
Percent Canada	(9.4)	(70.9)	(80.3)	(9.8)	(9.9)	(19.7)	(100.0)	-

Source: Ibid.

TABLE 15 - EXPORTS OF PORK FROM UNITED STATES TO ALL COUNTRIES, FIVE YEAR AVERAGES, 1956-70, AND ANNUALLY, 1960-70

Year	Cured or Hams and Shoulders ¹			Canned			Exports to Canada			Shipments ⁵ to Territories
	Fresh or Frozen	Cured not Canned	Bacon	Other ²	Hams and Shoulders	Other	Total Exports	Million ⁴ U.S. Export	Percent	
- million pounds -										
Five Year Average										
1956-60	11.3	17.9	10.3	22.2	1.3	6.4	69.4	4.1	5.9	50.0
1961-65	60.5	7.2	5.6	14.5	0.6	1.7	90.1	48.7	54.1	60.6
1966-70	57.2	6.0	4.2	8.6	-	2.6	78.6	36.1	45.9	73.8
Annual										
1960	22.5	13.8	14.2	14.3	.8	3.9	69.5	17.0	24.5	53.3
1961	38.1	7.3	5.6	15.3	.6	1.4	68.3	40.6	59.4	56.9
1962	35.4	5.8	5.3	15.6	.4	1.1	63.6	36.4	57.2	57.5
1963	105.7	7.1	6.0	17.1	.7	1.5	138.1	86.6	62.7	58.5
1964	96.1	9.8	5.9	17.9	1.4	1.9	133.0	52.6	39.5	69.2
1965	26.8	6.0	5.2	6.9	3	2.8	47.7	27.5	57.7	61.1
1966	29.6	6.1	5.3	6.9	3	3.0	50.9	27.3	53.6	67.2
1967	30.7	4.7	4.8	7.4	3	3.0	50.6	26.8	53.0	74.4
1968	62.5	4.0	4.4	11.7	3	2.5	85.1	36.4	42.8	78.7
1969	121.6	8.6	3.6	9.2	3	2.2	145.2	66.9	46.1	63.4
1970	41.6	6.4	3.1	7.7	3	2.4	61.2	22.9	37.4	85.5

Source: USDA, Foreign Agricultural Service, Washington.

¹ Dried, salted, or smoked.² Pickled, salted, or otherwise cured.³ Not reported separately; if any included in cured not canned.⁴ As reported by Trade of Canada, D.B.S.⁵ Puerto Rico, Virgin Islands, Guam and Wake.

TABLE 16 - IMPORTS OF PORK INTO THE UNITED STATES, FROM ALL COUNTRIES, FIVE YEAR AVERAGES, 1956-70, AND ANNUALLY, 1960-70

Five Year Average and Annual	Fresh and Frozen	Sausage	Hams and Shoulders	Bacon ²	Others ³	Total Imports	Imports from Canada ⁴	
							Million pounds	Million U.S. pounds (imports)
- million pounds								
1956-60	38.8	1.3	105.9	-	14.1	160.1	47.7	29.8
1961-65	40.2	1.9	149.2	-	20.9	212.2	46.6	22.0
1966-70	47.3	3.0	225.9	12.9	29.3	318.5	51.8	16.3
1960	38.4	1.7	118.5	-	12.7	171.3	45.1	26.3
1961	36.6	1.7	119.4	-	15.2	172.9	42.4	24.5
1962	40.5	1.8	137.0	-	24.6	203.9	44.3	21.7
1963	37.0	1.8	145.3	2.7	23.7	210.5	44.5	21.1
1964	39.2	1.9	142.1	8.9	18.5	210.6	48.4	23.0
1965	48.0	2.0	177.0	12.3	23.0	262.3	53.3	20.3
1966	42.0	2.7	199.8	20.6	33.2	298.3	44.3	14.9
1967	47.4	2.5	212.6	12.7	31.7	306.9	53.2	17.3
1968	48.4	2.5	229.3	12.3	31.6	324.1	54.2	16.7
1969	42.9	3.9	235.0	9.3	24.4	315.5	48.5	15.4
1970	55.6	3.6	253.0	9.7	25.8	347.6	58.7	16.9

Source: Ibid.¹ Primarily all canned; the balanced cured.² Approximately 70 percent canned the balance cured; up to 1963 reported under hams and shoulders.³ Primarily pork luncheon meat, canned.⁴ As reported by Statistics Canada, Trade of Canada.

TABLE 17 - IMPORTS OF CANNED PORK INTO THE UNITED STATES BY COUNTRY OR ORIGIN,
1964 TO 1970

	1964	1965	1966	1967	1968	1969	1970
- million pounds -							
<u>Hams - Shoulders</u>							
Denmark	58.3	72.5	87.7	80.4	91.6	92.7	104.4
Netherlands	37.7	45.5	59.2	69.7	77.0	80.4	80.9
Poland	32.3	39.2	38.9	44.0	40.9	42.9	45.7
Yugoslavia	5.2	10.0	6.6	10.8	11.4	10.9	10.5
Total	133.5	167.2	192.4	204.9	220.9	226.9	241.5
Other Countries	7.0	8.1	5.8	5.9	6.2	6.1	10.1
Total to U.S.	140.5	175.3	198.2	210.8	227.1	233.0	251.6
<u>Bacon</u>							
Denmark	4.0	7.4	16.3	8.8	8.8	6.0	6.6
Other Countries	0.8	0.2	0.9	0.8	0.2	0.3	0.6
Total to U.S.	4.8	7.6	17.2	9.6	9.0	6.3	7.2
<u>Other (canned)¹</u>							
Denmark	3.9	5.1	12.4	11.9	10.2	6.9	7.8
Netherlands	0.2	0.4	5.1	4.3	4.4	4.7	5.2
Poland	10.9	13.6	12.6	12.8	13.7	10.5	10.4
Yugoslavia	2.7	2.9	2.1	1.3	2.0	0.8	0.7
Total	17.7	22.0	32.2	30.3	30.3	22.9	24.1
Other Countries	0.2	0.5	0.6	0.4	0.6	0.6	0.5
Total to U.S.	17.9	22.5	32.8	30.7	30.9	23.5	24.6
<u>Total Canned</u>							
Denmark	66.2	85.0	116.4	101.1	110.6	105.6	118.8
Netherlands	37.9	45.9	64.3	74.0	81.4	85.1	86.1
Poland	43.2	52.8	51.5	56.8	54.6	53.4	56.1
Yugoslavia	7.9	12.9	8.7	12.1	13.4	11.7	11.2
Total	155.2	196.6	240.9	244.0	260.0	255.8	272.2
Other Countries	8.0	8.8	7.3	7.1	7.0	7.0	11.2
Total to U.S.	163.2	205.4	248.2	251.1	267.0	262.8	283.4
<u>Total All Imports</u>							
Percent Canned	77.5	78.3	83.2	81.8	82.4	83.3	81.5

Source: Ibid.

¹ Primarily pork luncheon meat.

TABLE 18 - TARIFF RATES ON IMPORTS OF LIVE SWINE AND PORK PRODUCTS, 1970, 1971, 1972

Item	Unit	Canada			United States
		British ¹	Preferential	Most ²	Most ³
Favoured Nation	Favoured Nation				
<u>Live for breeding</u>	-	free		free	free
Hog for slaughter	lb.	free		0.5¢	0.8
January 1, 1970					0.7
January 1, 1971					0.6
January 1, 1972					0.5
<u>Offal</u>	lb.	0.5¢		0.5¢	0.8¢ - 4%
January 1, 1970					0.7¢ - 3%
January 1, 1971					0.6¢ - 3%
January 1, 1972					0.5¢ - 2.5% ⁴
<u>Pork Fresh or Frozen⁵</u>	lb.	0.5¢		0.5¢	1.0¢
January 1, 1970					0.8¢
January 1, 1971					0.7¢
January 1, 1972					0.5¢
<u>Bacon, Hams, Shoulders⁶</u>					
Not canned, cooked or boned	lb.	free		1 3/4¢	2¢
Other (boned)	lb.	free		1 3/4¢	3¢
<u>Pork salted in barrels</u>					
Not boned	lb.	free		free	2¢
Boned	lb.	free		free	3¢
<u>Pork canned⁷</u>	lb.	15%		25%	3¢
<u>Hams canned⁷</u>	lb.	15%		20%	3¢
<u>Lard⁷</u>	lb.	1¢		2¢	3¢

¹ Includes United Kingdom of Great Britain and Northern Ireland, and any other British countries, colonies or territory under British trusteeship.

² Includes United States, Denmark, Netherlands, Hungary, Poland in addition to some 90 other countries.

³ Includes Canada, Denmark, Netherlands, Poland, Yugoslavia in addition to all non-Communist countries.

⁴ U.S. tariff - 0.5¢ when 20¢/lb. or less; 2.5 percent when over 20¢/lb.

⁵ Canada includes fresh pork sprinkled with salt but not cured.

⁶ Prepared or preserved other than canned.

⁷ Canada - New Zealand trade agreement duty free.

TABLE 19 - COMMERCIAL HOG SLAUGHTER, PRICES, AND TRADE, CANADA AND UNITED STATES, 1961 - 1970

Year	Commercial Slaughter			Hog Prices ¹			Canada Trade		
	Canada	U.S.	Total	Canada as % of Total	Canada (Toronto)		Difference	Exports to U.S.	Imports from U.S.
					(8 markets)	U.S.			
- million head -									
1961	7.6	77.3	84.9	8.9	28.30	22.70	5.60	42.4	40.6
1962	7.7	79.3	87.0	8.8	29.60	23.43	6.17	44.3	36.4
1963	7.6	83.3	90.9	8.4	27.80	21.59	6.21	44.5	86.6
1964	8.3	83.0	91.3	9.1	27.30	21.44	5.86	48.4	52.6
1965	7.9	73.8	81.7	9.7	33.40	29.77	3.63	53.3	27.5
1966	7.9	74.0	81.9	9.6	35.90	32.73	3.17	44.3	27.3
1967	9.1	82.1	91.3	10.0	30.70	26.99	3.71	53.2	26.8
1968	9.2	85.2	94.4	9.8	30.80	26.71	4.09	54.2	36.4
1969 ³	8.7	83.8	92.5	9.4	35.70	32.98	2.72	48.5	66.9
1970 ³	10.1	85.8	95.9	10.5	32.30	29.65	2.65	58.7	22.9

¹ Canada's price is for Grade A carcasses (warm dressed weight) at Toronto through 1968, and for the Index 100 grade for 1969 and 1970. The U.S. price is the average price of barrows and gilts at 8 midwest markets (7 markets starting January, 1969), liveweight, converted to Canadian dollars dressed weight using the annual average dressing yield for U.S. federally inspected slaughter and the average Canadian-U.S. dollar exchange rate. The differences in grades and pricing system and arbitrary selection of pricing points make the above price differentials rather rough approximations of value differences in the two countries. Also see discussions in text.

² Product weight.

³ Note the several changes in the basis of pricing indicated in footnote 1.

TABLE 20 - LIVE HOG EXPORTS TO UNITED STATES REGIONS, BY REGION OF LADING IN CANADA, 1970

1970 United States by Regions	Region of Lading					
	East		West		Canada	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
New England	277	2.7	-	-	277	0.4
Middle Atlantic	668	6.8	-	-	668	0.9
South Atlantic	57	0.6	1,648	2.6	1,705	2.4
East South Central	45	0.5	38	0.1	83	0.1
East North Central	9,323	89.2	13,983	22.4	23,306	32.0
West North Central	43	0.4	17,930	28.8	17,973	24.7
West South Central	33	0.3	176	0.3	209	0.3
Mountain	3	0	6,325	10.2	6,328	8.7
Pacific	-	-	22,209	35.6	22,209	30.5
Total to U.S.A.	10,449	100.0	62,309	2	100.0	100.0
Exports by Region of Lading to the U.S.A. -	5,003		10,783		15,786	
1969						

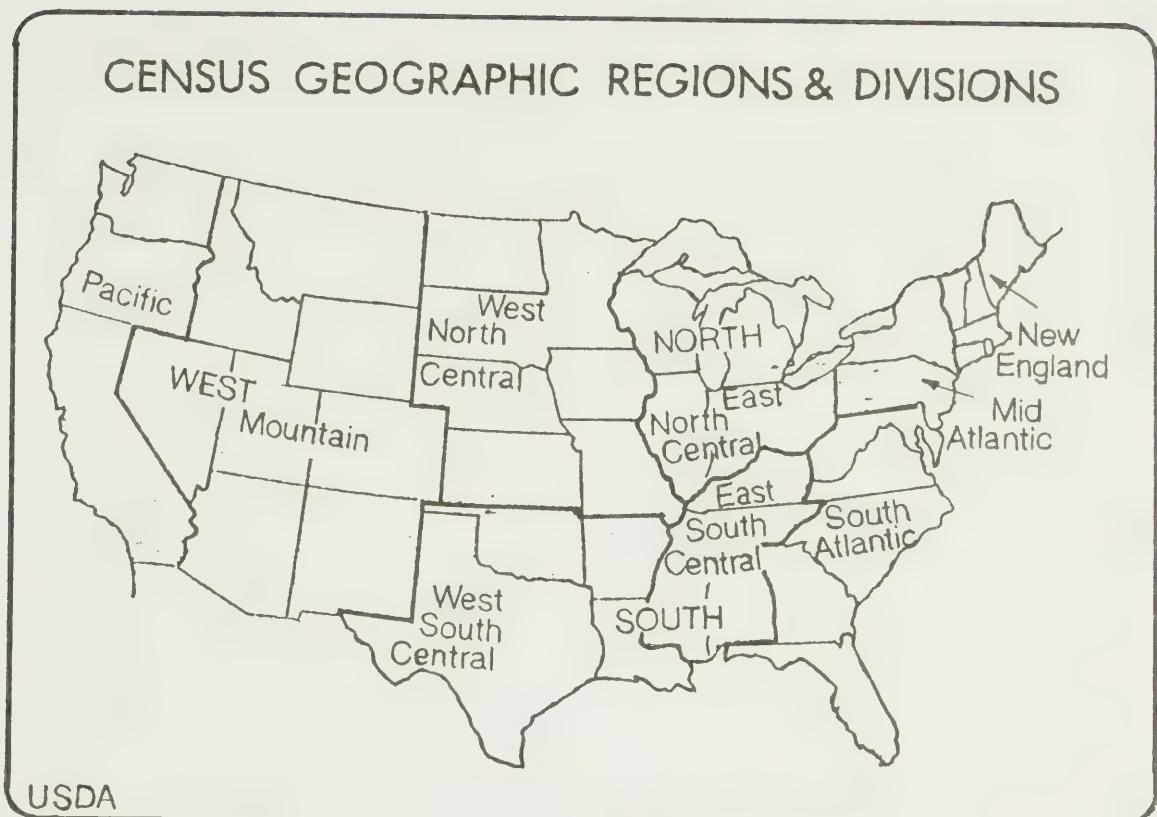
Source: Canada, D.B.S., Trade of Canada (Ottawa: D.B.S.).

1 Includes 10,204 head from Ontario, 137 head from Quebec, and 108 head from the Atlantic Region.

2 Includes 675 head from British Columbia and 61,634 head from the Prairie region. The movement by Province from Alberta, Saskatchewan, and Manitoba, respectively, is not readily available because boars and sows of Alberta and Saskatchewan origin are usually assembled for export at Winnipeg. The Alberta Hog Producers Marketing Board, however, reported the sale on export of 22,938 head in 1970, 6.2 percent of all hogs sold through the Board.

3 Of the 72,758 exported, there were 1,293 head of breeding stock (officially reported as "Purebred" swine).

Figure 1



Regions of primary importance in Canadian-United States pork trade are:

Mid Atlantic: New York, New Jersey, Pennsylvania.

East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin.

West North Central: Minnesota, North Dakota, South Dakota, Iowa, Nebraska, Missouri, Kansas.

Pacific: Washington, Oregon, California.

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